THE TEACHING OF PHILOSOPHY AND THE PRE-PHILOSOPHICAL CURRICULUM IN SCHOOLS AND COLLEGES.

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Abstract

Chapter 1 introduces the main issues including those of definition, within a history of ideas context, and explains how the argument will proceed in the succeeding chapters. Chapter 2 considers a wide range of claims and counter-claims concerning the teaching of philosophy and a pre-philosophical curriculum. The transcendental claim that pre-philosophical and higher order thinking are de facto taught in all schools, is combined with other strong claims to make the case for developing a *philosophy and pre-philosophical curriculum*.

Chapter 3 argues the claim from transcendental realism, following Kant and Bhaskar, that philosophical concerns are pervasively present in the curriculum, pedagogy and organisation of schools. Chapter 4 shows how a philosophically-driven pedagogy can be informed by philosophical theory concerning conditionals, counter-factual and possible worlds thinking.

Chapter 5 demonstrates the importance of the claims for benefits from thinking and philosophising in relation to the intellectual and moral dispositions, and the virtues. Chapter 6 examines discussion and practice of the canonical in philosophy and pre-philosophy, through a series of comparative case studies. The extent to which the National Curriculum for England and Wales might present a canonical form of the pre-philosophical curriculum is examined. Chapter 7 recommends, in practical and theoretical ways, how a strategy for a whole school or college approach to *the philosophy and pre-philosophical curriculum* can be devised and implemented.

Chapter 8 considers particular issues of personal, professional and pedagogic ethics which teachers will need to address. The importance of narrative and philosophical auto-biography is argued. It is claimed that a teacher should be a transformative professional and public intellectual.

A concluding over-view envisages prospects for further philosophical and scholarly enquiry, and empirical and public policy research.

Thirty-eight Appendices of reference and teaching materials, together with a Bibliography of works referred to in the text and notes, illustrate the argument of the thesis and provide teaching material for teacher education.

Acknowledgement

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CHAPTER 1

Introduction.

1. The main argument of the study

An extended study of the curriculum which would appropriately precede the formal teaching of philosophy in schools or colleges is undertaken in this thesis. The main argument is that a pre-philosophical curriculum can be identified in the curricular, pedagogic and managerial forms of practice that precede the academic teaching of philosophy (which begins normally at sixteen years). Taken together, the two components are characterised as *the philosophy and pre-philosophical curriculum.* It is argued that the development of a capacity to think philosophically, and experience 'cognitive emotions' of a philosophical nature, can occur in the context of the general curriculum and particularly within specific subject teaching. However, this process is *pre-philosophical* in that it does not exhibit the features of sustained philosophical intercourse. The concept of *the pre-philosophical curriculum* is preferred to other formulations such as 'critical and creative thinking', 'higher order thinking' or 'metacognition,' because it conveys inclusively and accurately the centrality of philosophical content in any general curriculum.

A central argument of the thesis is as follows. A pre-philosophical curriculum and pedagogy exists, transcendentally, and is therefore *de facto* already taught. This general transcendental claim stands irrespective of any individual interpretation of what a particular version, or canon for the philosophy or pre-philosophical curriculum might look like. Importance must be attached to the explicit articulation of the philosophy and pre-philosophical curriculum one is already teaching. A state of affairs exists in which little formal curriculum literature or philosophical guidance is available as to how teachers might proceed. A range of claims and counter-claims for teaching philosophy and a pre-philosophical curriculum can be identified. Claims which relate to topics recently explored in mainstream philosophy, concerning a philosophical canon, counterfactual and 'possible worlds' and neo-Aristotelian approaches to virtue-ethics, are argued to be of particular importance. [1]

It is argued that each school and college should identify its philosophy and pre-philosophical curriculum. These foundations of philosophical thinking will give equal emphasis to cognitive aspects and the education of the feelings or dispositions. A pre-philosophical curriculum will pay particular attention to speculative, conditional and counter-factual thought. [2] An integrated curriculum in pre-philosophy and philosophy is seen as having an important contribution to make to 'whole school' improvement and effectiveness, and to the strengthening of pedagogy within the National Curriculum. [3] Careful design and teaching of the *pre-philosophical curriculum* is advocated; and a range of philosophical and curriculum resources is identified, upon which teachers can draw in organising this as a common, *entitlement* curriculum.

An original feature of the study consists in the drawing together of a multi-disciplinary field of study of some complexity. [4] Topics beyond the customary purview of formal philosophy, such as informal logic, creative and critical thinking, higher order thinking, problem solving, and argumentation theory require coverage in approaching the question of a *philosophy and a pre-philosophical curriculum.* For instance, the study draws selectively on the literature of curriculum theory in moving towards an account of how the philosophy and pre-philosophy curriculum can be implemented in a practical form in schools. Many philosophers see important links between general philosophy and critical thinking, including Norris (1985, 1992a, 1992b), Siegel (1987, 1988, 1993) and Weinstein (1993a, 1993b). Literary philosophers see their subject as having a close relationship with philosophy for children (Matthews 1994,

Nussbaum 1988). A range of terms which bear on philosophical questions recur, shift, and overlap in the literature on teaching of critical thinking and philosophy, and in the organisation of school, college and university curricula. [5] Not only the epistemological and ethical, but the metaphysical and aesthetic areas, these being the four main, traditional areas of philosophical enquiry, require close attention by those preparing a *philosophical and pre-philosophical curriculum*. This need is particularly evident in chapter 4 where the curriculum and pedagogy of conjectural, *stochastic* thought is brought into focus.

2. Philosophy's relationship with critical thinking and related areas

Critical and creative thinking, higher order thinking, problem-solving, philosophy for children, and thinking skills comprise a group of approaches which can be argued to share a 'family resemblance' to philosophy, both in the way they are treated in the literature and for purposes of study. [6] I deal with these developments as part of *the pre-philosophical curriculum*, inasmuch as that they relate to philosophy in a manner which is preparatory to its teaching as a specialist subject.

There are major implications for school and college life in relation to which particular forms of philosophy teaching and critical thinking are adopted. Following scrutiny of the claims for teaching philosophical and pre-philosophical curriculum, it will be argued that certain significant and persuasive claims require a 'strong' version of a *philosophy and a pre-philosophical curriculum* to be taken up by educators in a whole school or college approach. The 'strong' version of curriculum which is advocated here has more wide-ranging pedagogic, curricular and even managerial implications than would some other approaches. The 'contested' nature of some claims, and the need for hermeneutically-located, 'ownership' of the curriculum by 'empowered' teachers, schools or colleges (Fullan 1992), means that a local view must be taken as to the curriculum to be adopted in a particular setting (Gallagher 1992). The argument that there is no need to teach philosophy and a pre-philosophical curriculum is rebutted by the *transcendental claim*, which is presented as the leading claim in chapter 3. This study is, consequently, critical of the view which might be characterised as Austinian minimalism: namely, that philosophers should confine themselves as journeymen to

the low-level and unpretentious task of the linguistic clarification of problems. There are considerable pitfalls, it is argued, in limiting the pre-philosophical curriculum to the study of informal logic, problem-solving, or modest critical thinking exercises. [7]

The different social and intellectual practices presented in the claims for teaching philosophy and pre-philosophy, constitute a spectrum, and exhibit a set of family resemblances, rather than a number of discrete, philosophical positions. They can be brought together in various combinations. The philosophical perspective of transcendental modal realism (see chapters 3 and 4), and the adoption of a canonical and hermeneutic perspective (see chapter 6), are advocated as essential for a full response, as is the role of the teacher as a philosophical person and transformative, public intellectual (see chapter 8). The 'strong' version claims are sufficiently important and general, it is argued, that they will necessarily involve notions of 'entitlement', rights and responsibilities in relation to educators making a *pre-philosophical curriculum* available (see chapter 7).

3. Medieval origins from theology

A foundational question in such a study as this concerns how far philosophy itself is seen as a discrete, specialist, and 'metacognitive' discipline. Fairly frequent reference is made in this study to the legacy of the Greek philosophers. However, it is usually argued that Western philosophy emerged from scholasticism with a distinct subject matter (Leff 1958, Price 1992, Rorty 1979). The notion of an autonomous discipline called philosophy distinct from and sitting in judgement upon both religion and science is of quite recent origin. Leff (1958: 19) argues that until the modern historical period the primacy of theology preceded that of philosophy. [8] For Duns Scotus and those medieval, scholastic theologians who were also practising philosophers, the most important features of their philosophy were worked out in the context of theological questioning. The teaching of thinking, logic, and philosophy in the scholastic tradition and in the early setting of the European and other universities were all carried on simultaneously.

Price, Leff, Copleston (1950, 1953) and others have traced the intellectual history of these developments. They argue that as soon as there was a desire to supplement

belief by reasoning, personal judgement came into play and with it the search for convincing arguments and concepts. [9] Philosophy, including metaphysics, then emerged as a discrete system of knowledge regulated by reason in contradistinction to theology - a body of revealed truth held on faith (Leff 1958: 14, Hancock 1967). The schoolmen did not confuse theology with philosophy, but in practice used philosophy for the systematic defence or explication of the data of revelation. As Price (1992) points out, the most influential vehicle for 'medieval intellectualisation' was philosophical and metaphysical discussion carried out within the especially fertile ground of religion. However, theologians began to assume that philosophy, as the work of reason unaided by faith, played an autonomous role and had a competence of its own - limited though it might be where questions of human nature and destiny were at issue. The ensuing transition towards a discrete status for philosophy provoked controversy among the school-men themselves. Consequent upon the appearance of the new intellectual discipline, there arose a need for a systematic account of philosophy and its place in the order of things. Thus Aquinas, for example, re-worked the speculative and practical philosophies of his predecessors in coherent reflection of his religious commitment. As a philosophical innovator, however, he introduced new ways of reasoning about problems and handled the teaching of the subject in a new way.

Modal thinking, reflected in theories of conditionals, counter-factual and possible worlds, will be given considerable prominence in in the study. These essentially ontological and metaphysical conceptions of philosophical thinking were revived within Platonic and Neo-Platonic tradition in medieval philosophy: and the present study re-asserts their importance, in advocating increased attention to ontology, aesthetics and metaphysics in the school or college curriculum. Their ascendancy within the central medieval tradition is most marked in the idea of the *Great Chain of Being* (Lovejoy 1936), an influential and systematic conception of other 'possible worlds'. It is reflected within the medieval theories of mind, knowledge, memory (Yates 1966), the marvellous (Le Goff, 1985: 40), magic and the occult (Thomas 1971), and philosophical thinking concerning modalities (Knuutila 1993). [10] It flourished in Victorian times in microscopic nanotechology, and Darwinian ideas of a 'missing link' in the chain (Spufford and Uglow 1996: 8-9). The metaphor, and associated notions of perfection and plenitude, dominated ideas of 'cosmography', natural, and inhabited worlds - and persists in modern cultural forms. One finds the question of a universal or perfect language - a central *Great Chain of Being* notion

(Eco 1997) - being pursued in philosophy lessons for Australian primary children (Cam 1994a, 1994b). [11]

Described by Augustine as 'the stomach of the mind', as Schechtman (1996: 220) reminds us, *memory* was given a significant place in medieval philosophy and will be given prominence in the present study. Medieval memory systems, such as the 'theatre memory' of Fludd (Yates 1966: 310), were in effect systems of possible propositional worlds of logic, spatially, geographically and architecturally conceived. Contemporary accounts of memory picture it as crucial to 'good thinking' based on narrative identity (Schechtman 1996), oral tradition and expertise (Neisser 1989), and prior and previous knowledge in inferential thinking (Fincher-Kieffer 1992). Memory is a key, essential ingredient when one is assembling a canon (Bloom 1994, Brann 1993, Rorty et al 1985), and its implicit importance is evident in the MacIntyrian (1984) or hermeneutic emphasis on tradition and continuity, and in the synaesthetic account of body-self in modal thinking (Clarke 1997, Dreyfus 1995).

4. The question of who should teach philosophy

The preceding discussion raises the question: who has the prior right to teach philosophy? Philosophy was taught by the church before it was taught by the state in public systems of education. Its role was to assist the aims of a theocratic polity: the hegemonic teaching of philosophy, and therefore philosophical discussion itself, was located within religion. In the analysis offered by Althusser (1984), during the Middle Ages, the Church (the religious State Ideological Apparatus) accumulated a number of such functions. Althusser goes on to make the claim, which is important for this study, that in the 'mature capitalist social formations' of today, these functions have devolved upon several distinct Ideological State Apparatuses, the most dominant of which is the 'educational ideological apparatus' (1984: 25). Not surprisingly, a view persisted in denominational school systems, right up to the present day, that philosophy teaching should be taught within the religious education curriculum which is its natural home. The extent to which philosophy and religion are seen as inextricably inter-connected in dealing with questions of metaphysics, ontology and moral philosophy is emphasised. Conceived in this way, philosophy is not a separate subject at all, and therefore should not be taught as such. Thus, for the thirty years

prior to 1986, A level philosophy appeared only as an option within the A level Religious Studies course.

The delayed introduction of philosophy as a specialist subject at the sixth form A level system in British schools thus occurs within a broad historical context. Prior to 1986 in England and Wales, philosophical topics for secondary school students were either treated within liberal arts or general studies courses; or covered, as in the case of the Romantic movement philosophers, by specialist teachers of English, history or modern languages. Evidence from empirical educational research of claims that this was the best way to teach philosophy to the older student is notably absent: by and large, it seems there was no conscious, pedagogic rationale for the teaching of philosophical thinking in the curriculum. [12]

5. Philosophy's emergence as a separate discipline

How the teaching of philosophy gradually becomes a separate activity with a discrete curriculum in the modern period is therefore relevant in setting a context. Descartes and Hobbes can be seen as having begun modern philosophy, even if they thought of their role as philosophers more in terms of a logomachy between science and theology. [13] The eventual demarcation of philosophy from science was made possible by the notion that philosophy's core was the 'theory of knowledge', a theory distinct from the sciences - because it was their foundation. It was not until after Kant that the modern philosophy versus science distinction took hold; indeed as late as the 18th century, science was still known as 'natural philosophy'. The history of the teaching of philosophy as a specialist subject in fact varies significantly in the curriculum traditions of different countries. MacIntyre (1981), Struever (1985) and Gadamer (1965) see a sense in which one moves to take up a position in a historical, intellectual tradition when teaching philosophy. That the history of philosophy as a subject, and the history of how that subject has been taught to young people, are closely-linked within the canon will be shown in chapter 6. However, many different justifications for teaching the subject can be discerned, some contrasting markedly with others, as for instance, in the contribution of philosophy teaching to the formation and education of élites compared with its contribution to democratic forms of life (Griffiths 1979).

Debate concerning the distinctiveness of philosophy as a specialist discipline has remained active among contemporary philosophers. Popper (1959, 1960), for example, took the view that philosophy is not sharply distinguishable from science in its methods - of trial and error, conjecture and attempted refutation; and in its subject matter, which is not only language but also the world to which language refers. There could be no uniquely correct philosophical method. If philosophy was to be of any general importance it would have to stand in a close relation to the work of other disciplines. However, as some philosophers continue to complain, there has been still a tendency to see 'philosophy as a self-contained eternal sector of intellectual production' (Ree 1978: 32). When isolated, as a special autonomous craft, from the general pursuit of knowledge philosophy can easily degenerate into the 'ironist' pursuit of scholasticism and triviality.

6. The Humean tradition

The most influential philosopher of education in the early part of the century, John Dewey (1916), took the view that the role of philosophy in civilisation was that it was dependent on, but should attempt to transcend, the specific culture from which it emerged. The educational imperative was clear. The function of philosophy was to effect a conjunction of the new and old, to articulate the basic principles and values of a culture, and to reconstruct these into more coherent and imaginative visions. [14] However, many philosophers after Hume have defined philosophy and its purposes in another quite different way. In emphasising the application of language and logic (and one could argue that the scholastics adumbrated this approach), they have taken a view which sees philosophy as a second-order discipline. The philosopher is presented as a 'journeyman', technician, or servicing agent, whose modest objective is to help people think more critically or clearly - but no more than that (Austin 1962). Philosophers cannot provide answers to larger questions, 'ironists' like Rorty (1989) claim. The Humean model has had considerable influence upon the development of informal logic, critical thinking, and philosophy for children in schools in the United Kingdom and the USA (Scriven 1966, Toulmin 1958). [15]

However, the insularity of Anglo-Saxon philosophy in its preoccupation with the clarification of second order philosophical problems has been increasingly criticised by

a significant cohort of philosophers (Lang 1990, Ree 1978). The need for philosophy to relate to empirical work in other disciplines has been urged, for example, by Dennett (1996) in relation to the philosophy of consciousness. He cites the Capgras delusion of a sufferer's conviction that a close acquaintance has been replaced by an imposter.

> This amazing phenomenon should send shock waves through philosophy. Philosophers have made up many far-fetched cases of mistaken identity to illustrate their various philosophical theories, and the literature of philosophy is crowded with fantastic thought experiments about spies and murders travelling incognito, best friends dressed up in gorilla suits, and long-lost identical twins, but the real-life cases of Capgras delusion have so far escaped philosophers' attention. (Dennett 148).

Mainstream European philosophy has also taken up a formal role. While traditional philosophical Marxism attempted reductively to focus all discussion of philosophical issues on the economic foundations of society, post-Marxist critical theorists have attempted to extend their philosophical purview to claims concerning the arts, literature, curriculum and the economy (Althusser 1984, Brent 1983, Bryan and Assiter 1993, 1995; Harris 1979, Wolff 1981). From its inception, one A level course, for example, has featured a work from mainstream European philosophy, Sartre's *Existentialism and Humanism* (1948), as a set text. These trends raise questions concerning the nature of a *philosophical canon* (see chapter 6).

One stream of thinking within the modern period is represented by the Kantian system and the school of Husserl, the existentialism of Sartre and Heidegger (1962), and the hermeneutic perspectives of Gadamer. It emphasises the importance of the individual's attempt to live as a person, exploring the possibilities of personal, self-constituted and narrative identity (Schechtman 1997), perceptions and experience (Schmitt 1967), moral imagination (Johnson 1993), and living as a person (Wollheim 1980a, 1984). [16] The contemporary hermeneutic perspective, as in the philosophical positions of Rorty or MacIntyre, can be seen as sympathetic to such views (Verges 1987). Gallagher (1992) offers educationists an analysis of the competing definitions of hermeneutics, including his favoured adoption of a *local moderate hermeneutic* (Appendix 34).

Reformist philosophers have increasingly regarded the subject as one which should and does provide clarification and answers to moral and other problems, such as

animal rights (Singer 1993), or in science more generally (Powers 1985, Wagner 1982). There has been growth in applied philosophy in such areas as medical and business ethics, values and rights education, and philosophical counselling (Rahav 1996).

This study shares that 'transcendental' view of applied philosophy. Dominant philosophical perspectives from other subject disciplines will be argued as of great importance, in framing the educational climate and canon for a philosophy and pre-philosophical curriculum. Great emphasis will be placed on the fecundity of such subjects as geography, history and physics in providing rich intellectual traditions, and distinctive modes of thinking. Particular examples include the contributions of: critical theory in English studies (Davies 1990, Eagleton 1983), phenomenology and 'mental maps' in geography (Downs and Stea 1973, Gould and White 1974, Huckle 1983), constructivism in science (Driver 1983, Blacker 1994), and phenomenography in economics and science (Marton 1981, Marton et al 1984). A central argument therefore will be that one must locate the teaching of philosophy and pre-philosophical curriculum within broad currents within the history of ideas; within political sociology, hermeneutics, philosophy teaching, or critical thinking as a *social movement.* Some of these currents can also be seen as an advancing counter-hegemony within the plate tectonics of that social movement.

7. A social movement with contested definitions

The broad range of developments characterised in this study as the *philosophy and pre-philosophical curriculum* do in fact exhibit the features of a variegated social movement (Giddens 1993). They include such strands as philosophy teaching to older students, philosophy with children, informal logic, argumentation, critical and creative thinking, transferable thinking, problem-solving and study skills. [17]

Social movements often develop in deliberate antagonism with other groups and have interests or aims they are *for*; and all have views and ideas they are *against.* [18] They are often concerned with what Gallie (1956) identified for the philosophical community as 'essentially *contested* concepts'. This feature is apparent, for example, in the tension between philosophy teaching and critical thinking. Philosophy teaching

in schools and colleges and the teaching of critical, creative and higher order thinking are largely separate traditions. [19] High school philosophy in the U.S. has a much less authoritative voice than formerly. [20] It occupies a declining power base within the curriculum arrangements having been unseated by critical thinking courses, a phenomenon also observable in some UK universities. Paradoxically, the philosophy A level has achieved an established position in the schools system of England and Wales, and such critical mass that the pressing question has arisen: *What is to be the pre-philosophical curriculum that precedes it?*

A *social movement* which is moving towards a more prescriptive canon, or canons, in *philosophy and pre-philosophy* requires a complex examination in philosophical terms, and for philosophical reasons. Much hinges on how one defines the purposes of philosophy teaching, and preparation for its teaching in schools and colleges. [21] The contestedness of concepts and meanings in this field recurs frequently.

Where there is need for coherent philosophical positions to be established questions of definition become important. This is especially evident, for example, in the case of critical thinking. In a series of influential definitions, (Ennis (1962, 1979, 1991) defines *critical thinking* as 'reasonable reflective thinking that is focused on deciding what to do or believe' (see Appendix 7). He designates sixteen abilities and, modifying his earlier definition, introduces twelve *dispositions* of the ideal critical thinker. [22] As chapter 5 will demonstrate, many critical thinkers have moved increasingly towards definitions of good critical thinking which involve habit, character trait, duty, and will in the disposition to persist in that thinking.

Similarly, in relation to *higher order thinking*, Daines (1987) argues it is important to be able to explain what meta-cognition is, its relationship to 'philosophising', and the extent to which it provides an epistemological foundation for the concept of higher order thinking. A representative definition of *higher order thinking* offered by Newmann and Wehlage (1993) contrasts it with *lower order* thinking (see also chapters 3 and 4). [23] Similar distinctions are identified elsewhere within the study, for instance in relation to *transferable* thinking and skills, vocational and values education (Appendices 10, 25 & 29).

Some philosophers of critical thinking like McPeck (1990) have claimed that thinking is only possible in relation to particular subject specific content, although the argument

that thinking can never be generalisable has also been strongly challenged (Quinn 1991, 1994, Weinstein 1993a). [24] This study will argue that thinking is both: usually subject specific in its originating forms; and often generalisable as meta-discourse, including philosophical discourse (chapter 5). However, there may be a distinctive account of 'thinking' to be given for each of the major areas of intelligence and creativity, as Gardner argues (1993, 1997). Gardner's (1997) re-working of the 'separate abilities' psychometry of 1930's psychologists postulates nine intelligences of which the latest, *existential intelligence* - 'curiosity about basic questions of existence', might equally be termed philosophical intelligence. [25] If there are discrete subject disciplines or areas of discourse, as Siegel, McPeck and Nussbaum wish to claim, then each of those areas will need its own treatment. It may then be asked whether thinking occurs differently within various intelligences and disciplines: within different sensory modalities (Cytowic 1995, Baron-Cohen and Harrison 1997): or within multiple literary identities or personality (Hacking 1995, Pessoa 1992, Ryan 1991); and whether, as Pinker (1994) argues, thinking without language may be possible. [26] Each of these cases raises a major, central question in the study, of whether 'thinking' can be seen monistically, as a unitary and generalisable process.

Creativity is also a contested concept within both cognitive psychology and philosophy. The working definition adopted here follows contemporary psychological, especially *connectionist* definitions (Boden 1994, Garnham and Oakhill 1994), and a changing educational consensus (Fryer and Collings 1991). An idea is creative (for a particular person) if that person could not have had that idea before. An idea is historically creative if no one could have had the idea before (Garnham and Oakhill 1994: 252). Metacognition is important in that creative thinkers are distinguished by the high quality of 'mental self-government' they exhibit (Sternberg 1988a, 1988b). [27] Memory must also be seen as playing an important, under-regarded role in creative thinking, as psychologists increasingly claim (Johnson-Laird 1993). [28]

Important technical innovations in philosophy, especially metaphysics and ontology, are identified as having particular significance for the thesis. Chief among these are: the philosophy of counter-factual and indicative conditionals (Edgington 1995, Jackson 1991); modal logic and possible worlds (Lewis 1986b); plausible historical worlds (Hawthorn 1991, Ferguson 1997), and computing, linguistics and possible worlds (Ryan 1991). Contemporary philosophical work in hermeneutics (MacIntyre

1981, Verges 1987, Gallagher 1992, Blacker 1991), in Aristotelian literary philosophy (Nussbaum 1986, 1994), and in the history of philosophy (Rorty et al 1984) is also given prominence. Certain dominant philosophical perspectives in curriculum theory and pedagogy, such as social constructivism and phenomenology, prove critical in demonstrating the case for transcendental realism, providing as they do evidence of the pervasive presence of philosophical assumptions in teaching, in which one's epistemological and *ontological* position is central (see chapter 3).

This study relies on a wide range of academic, cross-disciplinary sources in order to assemble its main perspectives. *Post-modern theory* emerging from a range of disciplines is, for example, argued to be relevant to any foundational philosophical pedagogy for a pre-philosophical curriculum (see chapter 4). *Post-modernism* is perceived, for the purposes of that argument, as consisting of three currents of thought in the history of ideas: i. cultural critiques of modernist art forms; ii. philosophical or thought in other disciplines, emphasising the fragmentary, tentative shifting, and plural nature of reality; and iii. general theories of contemporary society which see new developments in work organisation, technology, and social forms which are totally distinctive (as in the notion of a post-Fordist, post-industrial society). [29] The study also turns at various points to innovatory thought and re-appraisal in such topics as: intelligence and creativity (Gardner 1993, Perkins 1984, Sternberg 1985, Boden 1990), counter-factual thinking in psychology (Byrne 1997), critical theory, linguistics and semiotics (Loux 1979, Pavel 1986, Ryan 1991), computing and artificial intelligence (Boden 1994, Caillot 1991, Clark 1997), neuro-science (Cytowic 1995, Damasio 1994, Ortony et al 1988, Pinker 1994), psychiatry and psycho-analysis (Hacking 1995), and cosmology and quantum physics (Deutsch 1997, Rees 1997). [30]

Particular attention is paid to the hegemonic use of philosophy and pre-philosophical teaching in power relations within individual societies: for instance, in dealing with apartheid within a politically repressive society (Flanagan 1993); or seeking to change one in which gender relations are unsatisfactory (Haynes 1991). Hegemonic and ideological assumptions among leading philosophers in the field of critical thinking, recently subjected to critical attack, are given attention.

8. The debate re-configured

A re-configuration of the general debate which has emerged in the past decade will be identified and mapped out during the course of the study. New critiques have questioned the Enlightenment 'male' rationality and intellectual antecedents of the critical thinking movement (Haynes 1991, Blacker 1991). They identify the need to address an emerging, post-modern agenda (Kincheloe and Steinberg 1993, Kuhn 1992, Weinstein 1993a, 1993b). They advocate existentialist perspectives in primary schools (Bonnett 1994) or concerning intelligence (Gardner 1997). [31]

They promote various types of feminist perspective. Haynes (1991) in *Towards an Archaeology of Critical Thinking*, for example, offers a Foucaultian (1972) analysis of the distribution of power and hegemony within the critical thinking movement from a feminist perspective. Bailin (1995: 191) identifies six important strands in critical thinking which could give rise to a critique of critical thinking as biased against women. Critical thinking is argued as 'down-playing the emotions', as favouring the rational and the linear deductive over intuition, as tending to the aggressive and confrontational rather than the collegial and co-operative, as privileging individual and personal autonomy over a sense of community and relationships, as dealing in abstraction and failing sufficiently to recognise 'situatedness together with lived experience and concrete particularity', and as presupposing the possibility of objectiveness. [32] Assiter (1994) makes a neo-Aristotelian case for a 'body-self' perspective in relation to transferable thinking in vocational higher education. [33]

9. The structure of the thesis

The structure of the thesis is arranged so that philosophical foundations are argued before proceeding to educational prescription. Chapter 1 has thus far outlined within the context of the history of ideas some of the main issues and themes which recur. Features of the sociological phenomenon known as a *social movement* have been identified within the logomachy concerning definitions and the place of philosophy teaching. The appearance of philosophy as a discrete discipline and discourse tradition has been traced. Contested definitions and arguments have been discerned

concerning the place of philosophy, critical thinking and cognate developments within education.

Chapter 2 sets out the *main claims and counter-claims* concerning the teaching of a *philosophy and pre-philosophical curriculum*, and a position in regard to them is defined. Claims are identified which are essentialist, linguistic, developmental, ineffable, dispositional, transcendental, modal realist, hermeneutic, hegemonic, democratic, communitarian, and elitist. Various claims for the transferability of cognitive and ethical dispositional benefits are examined. A judgement on each of the claims is argued, highlighting those claims which are considered of particular importance or persuasiveness. Those counter-claims which raise important issues are given attention. A position is taken up which argues for a *strong version* of a *philosophy and pre-philosophical curriculum* based on the arguments of primacy, transcendental, modal realism, counter-factual and 'possible worlds' thinking.

Chapter 3 set outs in some detail the leading claim of *transcendental realism*, following Kant and Bhaskar, that philosophical concerns are pervasively present in the curriculum, pedagogy, and organisation of schools. The case arising from the transcendental argument is that even the purist, who would teach philosophy only to a minority of talented, older children, must concede that philosophical assumptions and questions are, as a matter of fact, dealt with through *a pre-philosophical curriculum* and pedagogy in classrooms - whether or not philosophy teaching as such is attempted. [34] A post-Kantian, transcendental argument advances a philosophical rationale for a broad version of a philosophy and pre-philosophical curriculum. The importance of notions of narrative, the self, agency and tradition is argued. [35]

Chapter 4 proposes that a philosophically-driven pedagogy can be derived from contemporary work on *counter-factual and possible worlds* thinking in philosophy, together with other disciplines including history, linguistics, science, cosmology, neurology, psychology and computing. Important implications are argued for one's approach to matters such as cross-domain thinking, sensory modality, intelligence and creativity, and narrative in teaching. [36] Counter-intuitive, quantitative thinking is examined, as well as the approach to qualitative and *stochastic* speculation. [37] It is concluded that possibilist thinking typically originates within individual subject specialisms or discourse and teaching, although generalisable meta-competences can nevertheless be distilled out.

Chapter 5 examines claims concerning the effects of philosophising and a pre-philosophical curriculum on the *intellectual, or ethical dispositions and virtues.* Links are made between conditional, possible worlds and dispositional thinking. A trend towards seeing critical thinking as a vehicle for training moral, including vocational virtues is traced. [38] The importance is brought out of conceptions of person, embodiment, philosophical autobiography, 'cognitive emotions' and ready-wittedness in developing education of the virtues and dispositions.

Chapter 6 considers discussion by philosophers of a *philosophical canon*, when its occurrence in several comparative education settings is examined. Examples are identified of a canon in pre-philosophy, critical thinking, philosophy for children, and national traditions of specialist philosophy teaching. The idea of an *inferred* canon for the pre-philosophical curriculum is introduced. Its presence is detected within the National Curriculum for England and Wales, when it is concluded that a fully coherent and explicit canon is not yet in place.

Chapter 7 proposes both practical and theoretical ways, arising from the philosophical position argued in preceding chapters, for implementing a *whole school or college policy* for a philosophy and pre-philosophical curriculum. [39] The case is made for curricular content and pedagogic strategies, including intervention programmes, that prepare for the formal study of philosophy in the later years of secondary education. A range of management issues including those relating to staff consensus, planning and review, philosophical and curriculum leadership are examined.

Chapter 8 argues for the importance of the teacher as a philosophical person, and professionally as a *transformative, public intellectual.* Particular responsibilities and obligations of the teacher, in respect of philosophical identity and autobiography, and the pastoral relationship with students are highlighted. Problems of personal and professional ethics which will arise for the reflective practitioner concerning, for instance, the vulnerable or 'inauthentic' student, or the question of 'ironism' in pedagogy, are addressed.

A concluding Over-view and Prospects proposes *further areas* for philosophical consideration, educational and public policy research. The need for further empirical research aimed at a more coherent approach to the *philosophy and pre-philosophical*

curriculum within the National Curriculum is identified. Caution concerning moral education directed towards the training of dispositions and virtues is advised. The great importance of counter-factual and possible worlds thinking in one's curriculum arrangements and pedagogic stance is again stressed.

The argument of the thesis is supported and illustrated by a range of Appendices. These *reference and teaching materials*, including some of original design, are conceived as *teaching resources* for use in the contexts of work in higher education at Master's level, and INSET and curriculum development activity for teachers and lecturers wishing to develop a *philosophy and pre-philosophical curriculum* in their schools or colleges.

There will be a need to know whether the philosophy and pre-philosophical curriculum which has been taught has been successful. A range of instruments and taxonomies are identified, which will be of help to those teaching and assessing the teaching of philosophical thinking and the pre-philosophical curriculum, in primary and secondary schools, and colleges (especially, Appendices 2, 6, 7, 8, 9, 10, 11, 12, 13, 17, 21, 22, 26). [40]

10. Important questions to be addressed

Some philosophical or educational questions arise in more than one chapter; and some guidance regarding this will assist the reader to gain maximum understanding from the thesis as a whole.

Chapters 1 and 2 address the questions: Does philosophy enjoy primacy as the pre-eminent and unifying form of meta-cognitive discourse which is de facto taught, and should be taught in schools and colleges? Is not pre-philosophical preparation for its study, in the form of *a pre-philosophical curriculum*, both worthwhile and justifiable? To what extent can the teaching of philosophy and a pre-philosophical curriculum be seen as a method of bringing about various forms of empowerment and hegemony? Should the broad democratic claim be accepted, that the study of philosophy can contribute to the flourishing of a democratic society? To what extent might there be

scope for the abuse of the teaching of philosophy and the pre-philosophical curriculum in terms of ideology and indoctrination?

Chapter 2 asks : Can the fact that children display wonder and the pre-philosophical beginnings of metaphysical awe be characterised as philosophical behaviour? Can the natural curiosity that children show in philosophical matters be described justifiably as 'philosophical'? Can the contemplation of ineffable or intractable problems provide children with a pre-philosophical foundation for the beginnings of metaphysical thinking? Should the essentialist claim that children have a natural affinity for, enjoyment of, and interest in philosophical questions, be accepted as evidence that they are philosophising in the formal sense?

Chapters 2 and 5 address such questions as: What kinds of philosophical thinking are not generalisable in the sense of being separable from their originating forms of discourse or subject disciplines? Does most philosophical thinking first occur pre-philosophically within an originating and specialist form of discourse or knowledge? Is the linguistic clarification of problems a main, or a subsidiary role of the philosophical and *the pre-philosophical curriculum*? Do some subject disciplines have a larger, more justifiable claim than others that they should teach, and provide philosophical leadership?

Chapters 2, 6 and 7 share a concern with problems such as: Is it a consequence of teaching philosophy and a pre-philosophical curriculum, that students acquire 'transferable' metacognitive skills of thinking and philosophising? How can a canon for teaching such meta-competences be identified? How can they be more successfully taught than at present?

Chapters 3 and 6 ask: Is the transcendental argument persuasive, that philosophical thinking lies behind the appearance of things? Does this entail acceptance of a further proposition that, at any given time, the philosophical thinking which lies transcendentally behind our teaching results in a pedagogic and curricular canon?

Chapters 4 and 5 raise questions concerning the theory of possible worlds and the dispositions, such as: Should counter-factual and possible worlds thinking be taught, on the grounds that it can make a particular and distinctive contribution to the proposed curriculum, both cognitively and in relation to the dispositions? To what extent could

a philosophy and a pre-philosophical curriculum benefit the formation of dispositions and virtues? Is some philosophical account of the relationship between thought and feeling necessary for any full pedagogic or curricular theory of the place of philosophy or pre-philosophical teaching? Has ready-wittedness a special place? Could the general introduction of values education present particular problems?

Chapters 7 and 8 address questions which concern both individual teachers and institutions such as: How can a school or college develop its own policy in response to the various claims? What is the best approach to planning and implementing a philosophy and a pre-philosophical curriculum in an individual school or college? How do we know when we have taught philosophy and the pre-philosophical curriculum well? What kind of person will the philosophically educated student be? What are the implications for educational policy school improvement and effectiveness? What are the implications for the individual teacher or lecturer? Is there any basis for a rights claim to be mounted, according to which the students are entitled to be taught, and the teachers obliged to teach a philosophy and the pre-philosophical curriculum? What implications are there for teachers in terms of pedagogic and professional ethics? What kind of support could higher education, and the philosophy of education as a discipline, offer this process? Is it desirable for the teacher to develop a philosophical position and autobiography, as a person and a professional, and to take on the role of a public intellectual?

A concluding Over-view and Prospects asks: What should be the focus of future work in this area, in research, curriculum development, philosophical investigation and public education policy?

The study aims at comprehensiveness and depth in formulating a general theory of, and approach to *a philosophy and pre-philosophical curriculum*. Such a unified account has necessarily to cover a wide spectrum of topics and disciplines. Core points have therefore sometimes been made briefly in the main text, and carried forward in detailed footnotes supported by an extensive set of references and appendices.

Notes to chapter 1

1 Virtue is defined as a settled disposition of the mind which determines choice. (Aristotle 1921: 2.6). It is both a good quality or an excellence in a person (Mautner 1996: 592). Dispositions can be ethical or relate to non-human facts about the world, as tendencies or conditional qualities, when in either case they may or may not be occurrent - an issue examined in chapters 4 and 5 in relation to possible worlds theory, and ethical dispositions (Audi 1995: 207). This study is implicitly critical of the Aristotelian distinction between intellectual virtues and moral virtues, for reasons which become apparent in chapter 5 in connection with the case for *cognitive emotions* (Scheffler 1991, Nussbaum 1988).

2 This study emphasises the professional and public responsibilities of the individual school and college, teacher and lecturer as a philosophical intellectual. However, as chapter 6 argues, it is appropriate in a plural society that teachers or lecturers are influenced by other sources of curriculum advice concerning a canon.

3 See Thornbury (1994) for a general analysis of the issues.

4 Coles and Robinson (1992) reported a wide range of activity flourishing in the UK.

5 For instance, the *Institute for the Advancement of Philosophy with Children* long resisted use of the phrase 'critical thinking' preferring to talk of 'philosophy with children', but finally renamed its main publication as a critical thinking journal. Greater recognition, and funding of critical thinking has promoted its currency in the US at the expense of 'philosophy with children' and high school philosophy (*Personal Communication*).

6 For example, see the general reviews of the field by Baron and Sternberg (1987), Nickerson, Perkins and Smith (1985), Powell (1987), Ramsden (1988), Resnick (1987, 1989), Sternberg and Bhana (1986), and Splitter and Sharp (1995). Some writers emphasise notions of meta-competence (Bridges 1994) or meta-cognition (McGuinness 1990, McGuinness and Nisbet 1991).

7 This is the view exemplified in much primary school practice. See Craft (1991) and chapter 6 for an account of what an 'entitlement' curriculum heavily emphasising 'thinking skills' might look like. On the other hand, trends towards the teaching of dispositions, values and moral education appear to grow in strength (Haydon 1997).

8 For example, Sanskrit has no word corresponding to philosophy in the modern Western sense. Because of the religious orientation of most Indian philosophy, viewpoints are mainly classified as orthodox or unorthodox according to whether they subscribe to the validity of the Veda, the orthodox scriptural texts. The dominance of religion over philosophy in most classical and medieval Indian thought reflects the orthodox theory that the ultimate aim of philosophy is 'release'. Other examples of 'contrastive rhetorics' (Swales 1990), or 'worlds' can be seen in the philosophical traditions of China, Judaism or Islam. Mashhadi (1997b:1) shows how quantum mechanics is more consonant with the non-duality of Asian thought. (I am indebted to Dr Mashhadi for a number of valuable comments.)

9 See Henry's analysis in Edwards ed.(1967: 252-7); or Copleston (1950, 1953), Leff (1958), or Price (1992) for more general accounts.

10 Knuutila (1993) in *Modalities in Medieval Philosophy* describes for example the sophisticated approach of 13th-14th century scholastic thinkers to 'synchronic alternative' possibilities.

11 The approach of the Institute for the Advancement of Philosophy with Children, and its adherents, is to work within ahistorical perspectives in linguistic and ordinary language philosophy. Cam (1994a) believes that philosophical problems such as whether a universal language is desirable, or how a bat sees the world, can be tackled by a teacher having no prior knowledge of what philosophers have said. See chapter 8 for further discussion of the pedagogic pitfalls of this extreme Austinian stance.

12 There were exceptions. Some philosophy was taught within the options of the A level course in Religious Studies. Philosophy was offered in a few secondary schools as an O level, or CSE Mode 3 subject by teachers interested in broadening the appeal of their existing religious education courses, for example within secular comprehensives: personal communication from Thomas Tallis School, London concerning the CSE course (June 1986). An O level in Logic ran for some years on a small scale (Plume School 1995). A project in the University of Swansea on O level logic flourished until 1990.

13 Hobbes, for instance, saw philosophy as the knowledge of effects or appearances as we acquire it by true ratiocination about knowledge of their first causes of generation. He had no wish to distinguish what he was doing from something else called science. Indeed, under the influence of Galileo, Hobbes conceived his philosophical system as one in which the method of geometry and the concepts of the new science of motion were to be applied to man in society. Condorcet and the *philosophes* attempted a similar approach in establishing the philosophy of the Enlightenment and, thereby, the gestation of social science. See Baker's (1975) biography of *Condorcet* for discussion of this point in relation to Enlightenment thought.

14 See Dykhuisen (1973) for a general discussion of this point. Philosophy was essentially a critical discipline and, as such, would always have work to do. More particularly, Dewey's (1910) analysis of reflective thinking was the first of many attempts to analyse the reasoning process into a sequence of steps. He suggested that there were five steps: identify the problem, define the problem, generate hypotheses, refine a hypothesis, test the hypothesis. This led Kilpatrick, founder of the *Project Method*, to claim that American education in the 1920's discovered the problem approach as a teaching device from Dewey's analysis of reflective thought (Dykhuisen (1973: 40).

15 A continuing genre of popular books with titles such as *Straight and Crooked Thinking* (Thouless 1930), *Thinking about Thinking* (Flew 1975), *What is the Name of This Book?* (Smullyan 1978) and *Metamagical Themes* (Hofstadter 1985) illustrate this idea perfectly. A new generation of Eurocentric, Anglo-American philosophers has promoted a renaissance of interest in applied and radical philosophy (Gibson 1984, 1986)

16 Husserl saw philosophy as a science. The truths he sought did not relate to any particular subject matter. He sought the truths on which all other human knowledge rests. Like logic and mathematics, philosophy was to be an a priori science or 'phenomenology'. But the phenomenology was to be descriptive, thus distinguishing its method from the established practice of philosophy, which he considered to be deducing what must be true of the world from prior assumptions - rather than looking at the world and discovering what it is like. See Hahn (1967) and Schmitt (1967: 135-151).

17 Giddens (1993: 646). This sociological concept is illuminative for understanding the rise of critical and creative thinking, philosophy for Children and A level Philosophy. For instance, the Glasgow-based *European Centre for Philosophical Inquiry*, in its claims for community-based philosophy teaching, can be seen as a *reformative* social movement -seeking limited change to the social order in relation to

inequality or social justice. The *alterative* social movement - which aims to secure partial change in certain individual traits - can be seen in the approach to the education of the dispositions in the Californian schools system (Facione and Facione 1992, 1994, Appendices 18 &19). Intellectual social movements with apocalyptic adherents also invariably exhibit schisms (Cohn 1957: 281-6). See for instance Bridges'(1996) discussion of whether the teaching of competency-based transferable thinking is 'progress or villainy'.

18 Social movement characteristics can also be seen, for example, in the induction training of the *Institute for the Advancement of Philosophy* which sets out to convey a particular, doctrinal view. The *European Philosophical Inquiry Centre*, at the University of Glasgow, claims an 'emancipatory' mission to inner city communities. (McCall 1994); The *Society for the Advancement of Philosophy and Educational Research in Education* (SAPERE) attempts to provide for a coalition of sometimes competing groups. Turner (1996) provides evidence that this sectarian conflict is 'hermeneutically' located. Lang (1990: 122) provides an account of divisions caused within the American Philosophical Association by Rorty's intellectual conversion and the 'subversion from within' of Anglo-Saxon philosophical method as traditionally pursued in the U.S. setting.

19 However, see how Hughes' (1996) approach combines teaching critical thinking with the addressing of philosophical topic in epistemology and the philosophy of language. Such an approach is unusual (c.f. Groake et al 1997, Halpern 1997).

20 *Personal communication*, 6th International Conference on Thinking, Boston Mass, August, 1994).

21 I adopt an 'ordinary language' definition of philosophy in general use in which philosophy is defined as 'the love of wisdom' and the 'love of exercising one's curiosity and intelligence' (Edwards 1967). It is the pursuit of wisdom and knowledge, investigation of the nature of being, knowledge of the causes and laws of all things, of the principles underlying any department of knowledge, and of particular philosophical systems; and it involves reasoning - and pure logic considered in general terms (Chambers 1983). It is that department of knowledge or study which deals with ultimate reality, or with the most general causes and principles of things, its most usual sense since 1794; and it involves the requirement 'to speculate or theorise' - an emphasis of this study (Oxford English Dictionary 1959). Philosophy has also moved increasingly towards becoming, as Moser (1996: 407) points out in the Supplement to Edwards'(1967) canonical Encyclopaedia of Philosophy, 'a multi-faced discipline that resists simple characterisation'. See also Monk (1998).

22 Ennis (1991) claims these are: 1. 'To be clear about the intended meaning of what is said, written or otherwise communicated; 2. to determine and maintain focus on the conclusion or question; 3. to take into account the total situation; 4. to seek and offer reasons; 5. to try to be informed; 6. to look for alternatives; 7. to seek as much precision as the situation requires; 8. to try to be reflectively aware of one's own basic beliefs; 9. to be open-minded; consider seriously other points of view than one's own; 10. to withhold judgement when the evidence and reasons are insufficient; 11. to take a position (and change a position) when the evidence and reasons are sufficient to do so; 12. to use one's critical thinking abilities'(8-9).

23 'Lower order thinking (LOT) occurs when students are asked to receive or recite factual information or to employ rules and algorithms through repetitive routines. Higher order thinking (HOT) requires students to manipulate information and ideas in ways that transform their meaning and implications, such as when students combine facts and ideas in order to synthesize, generalise, explain, hypothesise, or arrive at some conclusion or interpretation' (Newmann and Wehlage 1993: 3).

[24] See McPeck's (1990) *Teaching Critical Thinking* for a full account of his position. See also Lipman (1992), and (1988) in *Critical Thinking: What Can it Be?*

[25] Gardner's (1997) list of intelligences is as follows: linguistic, logical mathematical, musical, spatial, bodily or kinaesthetic, interpersonal, intra-personal, naturalist, and existential. The intra-personal intelligence appears to overlap with the existential in that reflexivity is likely to be a defining feature of both.

[26] Recent work in neurology and on synaesthesia suggests that we might also be talking about corporeal and sensory modalities. See Clark (1997), Cytowic (1995), Damasio (1994) and Motluk (1994).

[27] High intelligence is not a predictor of creativity, according to Sternberg's (1988a, 1988b) model. Creative thinkers are instead distinguished by *mental self-government*, which prefers a legislative (rule creating), rather than an executive (rule following) or judicial (rule assessing) style, the manner of directing one's intelligence being as important as its possession.

[28] Johnson-Laird's (1993) working definition of creativity, for instance, stipulates that: 1. The results of a creative process must be new, at least for the creative person, though they are produced from the existing elements; 2. The results must not be produced by recall from memory, rote computation or any other simple deterministic process. Boden (1994) offers a similar definition.

[29] See Green (1994: 67-83) for a further discussion of this topic. Some post-modern thinkers especially stress the aspect of playfulness (Kincheloe and Steinberg 1993), or its instantiation in adolescent culture (McLaren 1996) or the culture of computing (Plant 1996, Turkle 1996).

[30] This is a preliminary case for a pre-philosophical curriculum, including that for older students, which covers all of the curriculum subjects; and especially those concerned with the embodied self - such as drama, physical education and the plastic arts. Later chapters will argue for humour, wit, post-modernist 'playfulness', uncertainty and irony as also necessary ingredients. My own teaching has used 'ludic' material ranging from Mexican hat jokes to Chomskian linguistics. Murris (1993a: 30-31) makes a strong case for a visual approach through picture books in the early years. However, Olson (1994), Ong (1982), and those who see literature as liberation (Giroux 1989) also make a strong case for reading and the written word.

[31] For the larger debate on rationality and relativism see Hollis and Lukes (1982) and Oakeshott (1962), or Winch's (1958) *The Idea of a Social Science and Its Relation to Philosophy.*

[32] Five articles in *Educational Theory*, September 1995, explore the theme of bias in critical thinking, with an overview by Bailin. Bailin might also have mentioned 'ironism', as an aspect of 'objectiveness' which has received a good deal of attention (see chapter 8). The question of how far thinking involves feeling and emotion, as well as cognition, is also pursued in chapters 2, 3 and 5. See Harraway (1991) for a feminist perspective on 'situatedness'. However, this is not an argument pursued exclusively by women philosophers (see chapters 4-6).

[33] See Assiter in Bridges (1994: 17-26) concerning *Skills and Knowledges: Epistemological Models Underpinning Different Approaches to Teaching and Learning.*

[34] This position is elaborated in chapter 5. See also chapter 3 for the counter-argument put by Kitchener (1990: 416-31). Whether one calls the activity of the *Institute for the Advancement of Philosophy with Children* 'philosophy', as its progenitors claim, or 'pre-philosophy' seems to me to be a quodlibet. We practice algebra and teach statistics to young children without naming them as such. But their early foundations are valuable preliminary practice for what occurs later as formal

higher order and philosophical thinking, and it is therefore important that teachers think carefully about 'progression' from the outset.

35 Definitionally, narrative is taken in this study as having two important features. It is seen as a 'unique sequence of events, mental states, and happenings, involving human beings as characters or actors' (Bruner 1990: 43-44). Secondly, as Schechtman (1996: 96) argues, it is heavily contextual : 'the most salient feature of narrative form in general is that the individual incidents and episodes in a narrative taken their meaning from the broader context of the story in which they occur.'

36 The general, philosophical definition of *domain* offered by Honderich (1995: 204), as *a class of things* talked about, quantified, in relation to each other, or from which arguments are drawn, is adopted throughout this study.

37 Notions of *stochastic thinking and process* are explored more fully in chapters 4 & 5. One working definition of a stochastic thinking describes it as a probabilistic model of thinking in which or the outcome of a particular trial is dependent on the outcomes of preceding trials.

38 Mautner (1996: 593) suggests that there is often an accepted distinction in the terminology of contemporary philosophy between *moral* philosophy (which is concerned with the Kantian, or duty-based approach), and *ethics* (which is regarded as to do with the Aristotelian, virtue-based approach).

39 A range of resources which might support that process are provided as Appendices 1-38.

40 The importance of taxonomies originates with Bloom's (1956) attempt at a dichotomy between the cognitive and the affective, a perspective steadily questioned in this study. Taxonomies do however present a good opportunity for identifying those epistemological or other assumptions in teachers' thinking which, as McCann and Yaxley (1992) argue, need constantly to be made explicit through teacher education.

CHAPTER 2

Claims and counter claims for teaching philosophy and a pre-philosophical curriculum.

1. Four main types of claim

A variety of claims and counter-claims have been made for the teaching of *philosophy and a pre-philosophical curriculum* to children of school and college age. A first group of claims can be characterised broadly as ontological, morphological, psychogenetic and epistemological. Most have both pedagogic and curricular relevance. Of these I consider the most important to be the transcendental claim. A second group of claims is concerned with teaching philosophy and a pre-philosophical curriculum in order to engender particular sets of dispositions, intellectual and moral virtues. A third group of claims, most claims in fact, assert the transferability or generalisability of the benefits they bring. A fourth group of claims is concerned with how teaching philosophy and a pre-philosophical curriculum may be related to issues of power, democracy, ideology, autonomy - and hegemony, in their political, personal and societal meanings.

Each group of claims displays some features of one or more other groups. Many claims are consequentialist in that they argue that cognitive, dispositional or other practical benefits arise from teaching philosophy and a pre-philosophical curriculum. This range of claims includes those associated with the notion of 'transfer of training' which is well-known in the psychological literature. Consequentialist claims frequently appear in their cognitive aspect, their dispositional, and their hegemonic aspect.

2. The transcendental claim

The very important, transcendental claim for teaching philosophy to children, the one which I consider pre-eminent, is based on what might be called the 'argument from pervasive holism'. This proposes that philosophical assumptions and questions so pervade our lives, including the pedagogy, curriculum and organisation of schools, that the teaching of philosophy, pre-philosophy or higher order thinking must be accorded important status as a school subject in its own right. It can be linked with a primacy claim which claims that philosophy teaching, uniquely, gives insight into the unifying and over-riding principles of the disciplines and is an antidote to curriculum fragmentation, a claim reflected for instance in Baccalaureate programmes (Griffiths 1979, Whalley 1987).

Philosophical support for the transcendental claim may be found in the ideas of Kant, and post-Kantians such as Bhaskar (1978, 1986). The transcendentalist asserts that philosophical truths or generalisations, or noumena, are to be found pervading the empirical appearance of the world; and that it is not possible for us to discover these entirely unaided by means of a priori ratiocination. We therefore need to be taught, especially since many 'truths' including scientific ones are counter-intuitive. Philosophy should be taught so that the transcendental, pervasive presence and importance of philosophical considerations in the nature of things can be drawn to the student's attention (see chapter 3).

Such a claim, it will be argued, needs to be linked with a possibilist pedagogy which involves the need for the continuous search for new knowledge and teaching. For otherwise the transcendental position could, in its simplest form, lend itself to the

suggestion that with a once and for all pulling aside of the veil of the ignorance we could suddenly 'see the world as it is' (see chapter 4).

3. The primacy claim

A major traditional argument of philosophers from the Greeks onwards, asserts the ontological and epistemological primacy of philosophy as, uniquely, the pre-eminent and unifying 'meta-cognitive' discipline. Philosophy is 'that department of knowledge which deals with ultimate realities, or with the most general causes or principles of things' (Passmore 1967: 216-226).

Teaching those philosophical traditions and ideas which unify and transcend the subjects of the curriculum gives access to a higher-order discipline named 'philosophy', which is concerned with how all the disciplines are conducted. Through the study of philosophy, students can reflect on the deeper meaning and significance of what they already know rather than endlessly pursing new knowledge. Students will thus acquire techniques and insights into how questions which arise in other disciplines can be approached or even solved. [1] The prior and unifying role of philosophy contributes a countervailing force to premature specialisation and the fragmentation of curricula in schools and colleges. Those enthusiastic to teach philosophy in schools and colleges frequently cite the opinions of philosophers, including Locke, Vico and Dewey, as anticipating or providing a justification for pre-philosophical work with children (Lipman and Sharp 1978b: 38-39).

The primacy claim may also be seen as supportive of a consequentialist claim that teaching philosophy will bring numerous cognitive or other empirical benefits in relation to our practical affairs and understanding of the world, on account of its being a pervasive discipline as advanced in the transcendental claim. [2] The primacy claim arises from, and can be taken together with, other significant claims that a *philosophy and pre-philosophical curriculum* should be taught. [3]

4. The canonical claim

The transcendental claim and primacy claim could entail a further claim, for a philosophical and pre-philosophical canon, which is both curricular and pedagogic; a claim that not only should philosophy be taught, but laying down principles of selection for what philosophy should be taught. The canonical claim can be seen as emerging from the transcendental one insofar as a widely held, or commonly held set of curriculum and pedagogic practices has been found. The question may then arise: can there be only one canon in a pluralist society? It might be objected that unless or until all are agreed, a philosophy and the pre-philosophical curriculum should not be taught at all. To do so could be ideological or indoctrinatory (Siegel 1987, 1988, 1993). Alternatively one can propose, as in this study, that arrangements for the curriculum, as well as the 'invisible pedagogy' of school organisation, can be developed so as to accommodate canonical pluralism. However, discussions about which canon to teach are complicated by the transcendental claim, that philosophy is being taught *force majeure*, often through an 'inferred canon'. The central importance of narrative may also then be asserted (Hauerwas and Jones 1989; see chapter 3). In chapter 6 several approaches to the canon in philosophy or pre-philosophy are examined by means of case-studies. How the selection of a canonical curriculum in philosophy and the pre-philosophical curriculum can be undertaken in the particular setting of an individual school or college, and how that applies to the individual teacher, is set out in chapters 7 and 8 in the form of both argument and guidelines.

5. The essentialist claim

An argument about the nature of childhood is sometimes used to mount an essentialist claim for the teaching of philosophy, on child development and pedagogic grounds. Advocates of philosophy for young children put forward an 'argument from naivety', for instance, which is strongly reminiscent of the philosophical and educational theories of Rousseau and the 19th century Romantic notion of 'enthusiasm' (Evans 1940: 7-22). [4] Evidence is brought forward to the effect that children are, a priori and arising from their own nature, intrinsically interested in thinking and philosophical

questions (Gillespie 1978, Norton 1978, Radford 1996). Lipman and Sharp, for example, advance an essentialist account of children's natural and innocent interest in, and perplexity concerning philosophical questions.

> Every discipline possesses a consummatory aspect - an aspect in which its materials are apprehended and enjoyed for their own sake. So it is with philosophy. (1978a: 87) [5]

The authority of not only educational philosophers such as Pestalozzi or Dewey, but also mainstream thinkers such as Jaspers (1954) is brought forward to authenticate these naturalistic, essentialist, and almost mystical claims:

> A marvellous indication of man's innate disposition to philosophy is to be found in the questions asked by children. It is not uncommon to hear from the mouths of children words which penetrate to the very depths of philosophy. (Jaspers in Lipman and Sharp 1978b: 38).

As part of their essentialist case, Lipman and Sharp draw attention to the developmental adumbrations of philosophical thought, perceptual perplexity and curiosity in children, corroborated by anecdotes from the early lives of philosophers themselves (Radford 1996: 3-4; Toulmin 1978: 77). According to Lipman, Sharp, and Oscanyan (1980) there are three ways that children try to cope with the mysteries or marvels they find around them: through a scientific explanation, through a fairy tale or story that offers a helpful interpretation on a symbolic level, or 'by formulating the matter philosophically - in the form of a question' (33). But they concede that it *is* pre-philosophy rather than philosophy that they then teach:

> Although one doesn't teach philosophical topics to children, it is possible to elicit from them the wondering and questioning characteristic of philosophical behaviour at any age. (103)
>
> The paradoxes of appearance and reality, permanence and change, unity and diversity, are enchanting to them from early childhood, perhaps a decade or two before they are prepared to tackle Heraclitus or Parmenides. (Lipman and Sharpe 1978a: 86) [6]

A rebuttal of essentialism from the Piagetian perspective in child development argues, however, that it is impossible to teach children philosophy at all. Kitchener (1990: 16-31) claims that psycho-genetic research shows young children to be incapable of philosophising, since they cannot sustain sequences of post-formal operational

thought, either individually or in dialogic or group settings. The evident difficulty that most children have in thinking philosophically could be because they are being introduced to it too early. They have not reached the 'post-formal operational' stage of development in their thinking. Kitchener points out that Piaget's own position on this question was clearly set out in his article on 'children's philosophies':

> It goes without saying that the child does not actually work out any philosophy, properly speaking, since he never seeks to codify his reflections in anything like a system. (Piaget 1933: 534) [7]

Other philosophers have argued against teaching philosophy in schools, even at the stage of post-formal operations, because of the intrinsic, intellectual difficulty of the subject - and irrespective of the debate over child development theory. Philosophy, Scruton, Warnock or White (1992) would argue, is of its nature a difficult subject which can be and should only be taught to an intelligent élite, or minority, of older students. Some philosophers therefore opposed the introduction of the teaching of A level Philosophy (Ward 1983: 254). [8] Scruton, for instance, claims that the teaching of philosophy in schools attempts to introduce 'into the classroom issues which can only be understood properly at the level of postgraduate research'. He also warns against the problems of allowing students licence for unlimited questioning.

> I am against the teaching of philosophy in schools...It is fine to teach people to question, but first you must give them some certainties. (Scruton in Watts-Miller and Whiteside 1988: 3)

Warnock would prefer schools to concentrate on a prior understanding of a broad curriculum. [9]

> I am very much against having philosophy A level courses. The study of philosophy should be based on the history of the subject, it shouldn't be taken too fast, and it's awfully difficult. (Warnock in Davies, Pierce and Carnie 1987: 1)

The essentialist claim that children have a natural affinity for, enjoyment and curiosity concerning philosophical questions is accepted in this study. However, the Piagetian critique mounted by Kitchener is also valid in that children cannot be said truly to

'philosophise', in the sense of sustaining spoken trains of thought at a post-formal operational level. [10]

6. The claim of intrinsic worthwhileness

Some argue that studying philosophy and the pre-philosophical curriculum which precedes it has an intrinsic worthwhileness, irrespective of any benefits such as clearer thinking which might immediately arise, which will make a long-term contribution to the important educational aim of personal autonomy and flourishing. This argument has been advanced by those philosophers whose view is that education consists in the initiation of the immature into worthwhile activities (Peters 1972, White 1973, 1982, 1990). In *Towards a Compulsory Curriculum*, White (1973) argues that.

> If children were left free not to speak, study mathematics, physics, philosophy or contemplate works of art, then this might well harm them, since they might never come to know of whole areas of possible wants, both those connected with the pursuit of these activities for their own sake and those dependent on an understanding of these activities for their intelligibility. (35)

A counter-argument is that any educational case for teaching philosophy or thinking is vitiated if it cannot be shown that such teaching is good both in itself *and* for the empirical consequential benefits that it brings. It may be pointed out that philosophy teaching demonstrably does not bring intrinsic satisfaction universally to all. However, using the transcendental claim, one can argue that there is a de facto and a priori necessity for thinking pre-philosophically (Pritchard 1985): and that, furthermore, the pre-existing centrality of philosophy within the curriculum, through the categories of thought and perception, makes it indispensable to individual growth and flourishing. In such circumstances understanding acquired through a compulsory initiation into a *philosophy and pre-philosophical curriculum*, through those activities which will make formal philosophy attractive to us later, must be desirable.

7. The metaphysical and aesthetic claim from wonder and awe

A variant of the essentialist and the intrinsic worthwhileness claim is the claim from wonder, a neo-Thomist argument for tackling metaphysical questions. This argument evades the objection raised by child development theory, simply by proposing that 'philosophy begins in wonder', a lost dimension in education which philosophy teaching can help to restore. That children have a natural agenda of questions which elicit metaphysical awe and curiosity is claimed by Gillespie (1978) and others.

> Metaphysical questions are very large questions, and most difficult to come to grips with. Metaphysics is philosophy at its most comprehensive. It involves issues of maximum generality. You may wonder that your small children can raise such big issues. Yes, it is wonderful that they do. (Lipman, Sharp, and Oscanyan 1980: 31)

Buchmann (1989) argues the metaphysical claim from both an Aristotelian and Thomist perspective, when she describes the 'wonder' which arises for both teachers and children in subject areas such as mathematics.

> Wonderment and awe have their place as well in literary learning...If teachers go beyond the surface of form and terms - even concepts and principles - and begin to ask where concepts and patterns come from or what their meaning is, ready-made answers will dissolve, leaving things to marvel at. (Buchmann (1989: 51-3) [11]

She introduces the interesting argument of Aquinas, that teaching belongs to the contemplative life, since its subject matter is the unending consideration, and love, of truth in all its forms. Polanyi (1973: 173), Walsh (1993: 103-117) and Dunlop (1984: 94-5) argue a similar case in relation to similar notions of 'love of the world' or the 'intellectual beauty' of science. That metaphysical precocity occurs in young children is generally accepted in the psychological literature on creativity (Davis 1983, Torrance 1973, Appendix 20). Logic and proof are central techniques in philosophy; and it is therefore not surprising to find philosophers having their early interest in logic generated by the metaphysical apprehension of the aesthetic of which Buchmann speaks. Russell, for instance, at the age of eleven, was particularly entranced by the idea of proof in Euclidean geometry. [12]

> 'I had not imagined', Russell later wrote, 'that there was anything as delicious in the world. (It was) as dazzling as first love.' (Monk 1996: 25)

The importance of feeling is evident generally in such a claim, and in what Russell in particular has further to say on the matter. [13]

One counter-argument to the claim from wonder is that it is excessively mystical, evidence for it being difficult to gather. Only by proxy criteria of common sense and plain observation is it possible to know when children are gripped by awe; since they cannot put their feelings or thoughts into words, and we do not have privileged access to their minds. It is therefore doubtful whether sufficient grounds exist for characterising such mental events as 'philosophising' in any serious sense. [14] Such an objection can be partly met, by locating one's claim within mainstream Continental philosophical theory. Convincing phenomenological accounts concerning awe and dread and wonder, have been offered by Kierkegaard, Husserl, Heidegger, Merleau-Ponty and Sartre within systemic philosophical accounts of the 'metaphysics' of emotions or states of mind, as their commentators demonstrate (Grene 1967, Macann 1993). It might be further argued that such an objection is framed within a rather narrow and particular tradition of Anglo-American linguistic philosophy. Philosophical theology in the medieval scholastic tradition, for example the work of Bodin or Plotinus, or religious thinking in the Hindu, Vedic, or Buddhist traditions, offers considerable acceptance of notions of wonder or mystical apprehension. Furthermore, within European culture there has been a substantial, literary-philosophical tradition of 'wonder at nature', as reflected in the pantheism of Blake, Wordsworth, Fichte and Goethe.

One further objection argues that, despite what might be Thomistically desirable, education has other more practical purposes in addition to the unending consideration and love of truth in all its forms. [15] The Thomist position might in its requirement for reflection or contemplation be criticised on the grounds that 'ironist' thinking can inhibit action (Arendt 1971, 1978; Rorty 1989, see chapter 8). However many claims argue, correctly in my view, that reflective, metacognitive thinking pursued from early childhood onwards is the foundation for good thinking later. [16] I agree with the essentialist claim that children display wonder and metaphysical awe. While it is doubtful that such behaviour can be characterised as philosophical thinking, its

recognition and encouragement is a necessary part of the teaching of *a pre-philosophical curriculum.*

8. The claim from ineffability and aporia

The ineffable claim asserts that philosophy teaching and learning gives access to truths or understandings which are unsayable, inexpressible, or incommunicable. For example, it makes sense to say of something we know ineffably: 'I know something somehow, but I cannot put it into words' (Kennick 1967:181-3). [17] Alternatively, something may be thought to be ineffable 'when no description, however correctly applied, serves to communicate its nature to people lacking direct acquaintance of it' (Cooper 1992: 22). Cooper and some other philosophers see the ineffable (and the sublime) as principally relating to aesthetic experience. Raffman (1988, 1993), for instance, characterises 'nuance' ineffability as the most important of three forms of ineffable musical knowledge. McMahon (1996) argues for a theory of perception in which ineffability is an essential attribute of beauty. However, Cooper (1991) and Moore (1992) also attribute an importance to finitude and contingency which could have relevance to the theory of possible worlds (see section 10 & chapter 5). The ineffable can also be *aporetic* in the sense that one can be agape in wonder at 'ultimate questions' one contemplates but cannot solve; and where this happens the ineffable claim will be part of the claim from wonderment. However, the contemplation of unanswerable or 'ultimate' questions need not be linked with an accompanying sense of aesthetic or other wonder, and therefore the 'ineffable' claim can also be considered separately from aporia. Gardner (1993) for instance, sees epistemological 'uncertainty' as essential to the development of personal autonomy; and a reason for avoiding over-prescriptive curricula.

As with the essential claim from awe and wonder, it is disputable whether the ineffable is a claim that can be empirically demonstrated: for that would require privileged access to the contented mind of someone who claimed benefit from contemplating the ineffable. A more persuasive argument is again to assert the a priori, intrinsic worthwhileness of the contemplation of the ineffable. One can then argue that no consequences need necessarily arise - beyond the benefit of intrinsic satisfaction young persons experience when they are introduced to ineffable or

metaphysical problems. Encounter with *aporia*, through the antinomy in philosophy (Dancy and Sosa 1992), or the literary device of leaving the reader bemused or 'at a loss' (Lodge 1992), is similar to confronting the ineffable. [18]

The ineffable claim has another aspect. While other claims assert that the teaching of philosophy can alter the world or bring cognitive benefit, the ineffable claim contains the notion that philosophy should be taught at least partly because it can have no effect on the world. Children will find that studying philosophy will differ, beneficially, from their experience in all other subjects, because the problems encountered are frequently intractable, even insoluble. [19] Understanding and acceptance that 'some problems are intractable', Lipman et al (1980), Almond (1990) and others argue, is especially important for children. [20] It is the very experience of finding that some problems defy solution, yet invite curiosity and speculation, that constitutes the special value of teaching philosophy.

Philosophy syllabuses in schools have on the whole emphasised epistemology and moral philosophy rather than aesthetics or metaphysics. The importance of the ineffable claim consists in the scope it offers for a recrudescence of metaphysical thinking within the school curriculum. Important new developments in philosophy and logic, and in the mathematics and computing curriculum, concerning questions of 'vagueness', uncertainty and the logics which accompany them, underline this need (Kosko 1994). Regarding the empirical counter-argument that teaching philosophy, or pre-philosophy has no measurable benefits or solutions, it is not an adequate objection simply to show that the attempt to solve a problem by philosophising has been unsuccessful. The experience of making an aporetic attempt to solve a philosophical problem may be a sufficient justification, and pedagogic strategy in itself.

I support the claim that the contemplation of ineffable or intractable problems can provide a pre-philosophical foundation for the beginnings of metaphysical thinking. While denying that such activity meets the requisite criteria for being 'proper' philosophical thinking, I wish however to argue that it represents a crucial encounter with metaphysics that may not be available elsewhere.

9. The hermeneutic claim

Both neo-Aristotelian philosophers such as Nussbaum (1988, 1990) and some philosophers of critical thinking (McPeck 1990) have suggested that intellectual benefits inevitably accrue from the study of particular subject disciplines or discourses. [21]

> We frequently cannot determine whether evidence is good or not, because such a judgement depends upon special knowledge. One has to be a fellow participant in the particular domain of meaning to appreciate the proper significance of the evidence. (McPeck 1981: 28)

McPeck attempts to draw a sharp division between logic and critical thinking, arguing that the assessment of good reasons is dependent, epistemologically, on specialised, field-dependent knowledge rather than solely on logic. Such an argument can lead to a hermeneutic claim, epistemologically (Hekman 1986, Outhwaite 1987), in relation to moral philosophy (Gallagher 1992), to the school curriculum generally (Atkins 1988), or specifically to subjects such as geography (Harraway 1996). [22] The question, discussed in chapter 1, then arises: does philosophical thinking occur first, originate or flourish best within specialist forms of discourse and study? It may be pointed out that a purely meta-cognitive subject like philosophy has functioned since the Enlightenment on a free-standing basis, having its own innovations; and that philosophical thinking cannot therefore be said to be confined or inextricably linked to its originating, often non-meta-cognitive disciplines. [23] However, an exclusive reliance on a philosophical system which is not informed, and continually modified by reference to the 'empirical' world, including scientific discovery, would in my view be limited and sterile. The history of those deductive systems which have attempted to operate independently of empirical tradition, such as large areas of medieval scholastic thought, demonstrates the possible pitfalls of such an approach.

I accept the claim that most thinking does often first occur, pre-philosophically, within an originating and specialist form of discourse or knowledge: but I shall also wish to argue that meta-cognitive thought, as in the case of philosophy or historiography, can metamorphosise into a new and separate subject or sub-genre. [24] A significant hermeneutic claim can also be mounted in relation to the notion of the 'situated' person; and this argument is treated below.

10. The conditional, counter-factual and possible worlds claim

Transcendental realism could appear to suggest that once a step forward has occurred, the search for further meaning or new paradigms would be unnecessary. There would be no more to be discovered or re-formulated. Education would often be a finite activity if this were so and we should be incurious. What is needed therefore is a philosophical position which encourages continued questioning of the world, through empirical, metaphysical, and conjectural speculation. (A *world* or *domain* is taken, following Honderich (1995: 204), as a 'a *class of things* talked about, quantified, in relation to each other, or from which arguments are drawn.') Such an account will give an important place to conceptions of pedagogy and curriculum which see narrative as central to the process of becoming a person, or developing a canon (Schechtman 1996, MacIntyre 1989).

A branch of philosophy has grown up which, exploring the field of indicative and subjunctive conditionals, provides a foundation for thinking about possibility in new ways relevant to the curriculum and pedagogy of a pre-philosophical curriculum (Edgington 1995, Jackson 1991, Thornbury 1997b, 1998). It also makes provision for a theory of the dispositions which has considerable relevance to claims that the philosophy and the pre-philosophical curriculum should have a moral or ethical agenda.

The philosophical position of modal realism or 'possible worlds' as advanced by Lewis (1986b) claims that there are many possible worlds, any or all of which may actually exist. Most other philosophers take the view that, while there are many possible 'ersatz' worlds worth identifying, there is only one world which actually exists (Jackson 1991, Edgington 1995). Important achievements attributable to counter-factual thinking through sustained, rigorous stochastic speculation have occurred in qualitative historical studies (Hawthorn 1991, Ferguson 1997), quantitative and counter-intuitive economic history (Fogel 1970), and in mathematic, scientific or geographical innovation, (Gregory et al 1994, Hager 1995, Pearl 1988).

The possible worlds claim, it will be argued, can provide the foundation for a philosophy and pre-philosophical curriculum and its pedagogy. It encourages

children in sustained philosophical enquiry, engaging in speculation about unsolved problems, or possible solutions. [25] It requires that proper account be taken of the place of play, creativity, imagination and the aesthetic dimension through an active pedagogy and curriculum - as the proponents of philosophy for children argue. [26] There is considerable scope also for developing possible worlds theory in the subject areas. [27]

The possible worlds and conditionals claim is also important in relation to moral or ethical education. Dispositionality, a tendency of an object or system to act or react in characteristic ways in certain situations, is a concept of importance in conditional theory, since conditional, hypothetical and counter-factual statements are implied by dispositional claims (Audi 1995: 207). Virtue ethics sees virtues as settled dispositions of the mind which determine choice (Mautner 1996: 593), something half-way between a capacity and an action (Kenny 1992: 84). Dispositions as counter-factual capacities can be seen as pivotal, since they need to be maintained, or reformed when one is attempting to achieve a virtuous life (Williams 1987, White 1996). The possible worlds claim envisages a place for exploration of *both* paradigmatic, or rule-governed, counter-factual possibility; *and* contingent, post-formal and post-modern thinking involving tentativeness, metaphor, playfulness and irony. [28]

It will be argued that such thinking brings educational benefits to a philosophy and pre-philosophical curriculum, in the major areas of aesthetics, epistemology, ethics, and ontology within philosophy (see chapters 4 and 5). However, there are counter-arguments to the possible worlds account. The epistemological objection, as to whether a possible world has material facticity, is widely discussed (Jackson 1991, Edgington 1991, 1995). There may be a serious educational objection as to whether non-existing worlds can be taken as seriously as existing worlds. Teaching 'possible worlds' could be criticised as leading to a lack of discrimination between 'reality' and fantasy, damaging to children when it is taught as a foundational philosophical perspective. However, a methodology for deriving rules for thinking conditionally and stochastically, in approaching 'possible worlds' through particular subject areas, and through the curriculum as whole, can be successfully devised. This is is set out in chapters 4 to 7. [29]

11. The linguistic clarification claim

The linguistic claim takes a confined view of the concerns of philosophy, and of its pre-philosophical foundations, as being based on linguistic or common language usage and its need for frequent clarification. This view of the philosophical mission has dominated the mainstream of Anglo-American philosophy in the twentieth century, its methodology and other manifestations (Austin 1962, Norris 1985, Toulmin 1958). The linguistic claim can be seen as one for cognitive benefit, since it offers a metacognitive 'system' for transferable thinking (Norris 1992a, 1992b), a claim also made on behalf of philosophy with children (Haas 1976). As a tradition it is clearly represented in critical thinking textbooks. [30] Philosophy teaching proceeding by the discussion method can be carried on through talk, does not require written attainment, and is therefore uniquely accessible to all students. [31] The linguistic claim would argue that children in learning to philosophise should use the natural or 'ordinary language' so much favoured by the twentieth century philosophical tradition. Children do use 'ordinary language' and so, it is argued, they are linguistically well-equipped for philosophising.

There is also a broader sense of the linguistic claim which argues the need for recognising, as children already 'naturally' recognise, that language and dialogue are central to being or becoming a person (Lipman, Sharp, and Oscanyan 1980). [32] The linguistic claim is sometimes extended into a democratic, social constructivist, and even global claim for a community of enquiry (Splitter and Sharp 1995). Although the advocates for philosophy with primary children do not claim him as an influence, their account strongly resembles that of Habermas (1970, 1981) concerning 'communicative competence' in a consensual 'ideal speech situation'. [33]

The primacy claim described earlier, emphasised philosophy's leading role in offering primary explanations of the world, rather than its 'Humean journeyman' role in helping with second-order clarification of philosophical and linguistic confusions. In the majority of cases the clarification of fallacy or linguistic solecism is not the key device for solving problems or advancing philosophical argument. Restricting oneself to an exclusively linguistic approach could be seen as placing limitations on one's teaching aims and purposes. A minimum journeyman or Austinian claim might of course argue that greater personal autonomy for the learner is gained through the

acquiring of competence in linguistic analysis. It may then be extended into notions of empowerment and hegemony. Kincheloe and Steinberg (1993), for instance, propose that post-formal thinkers, operating at a metacognitive level, 'are able to see the way power shapes their own lives.'

I agree that linguistic clarification has an important contribution to make within the formal teaching of a philosophy and pre-philosophical curriculum, but consider that it should not represent philosophy as performing merely a service function in relation to the school or college curriculum.

12. The claim which relates to 'being a person'

A number of writers have advanced the claim that learning to think philosophically increases one's sense of 'living as a person' (Wollheim 1984: 283). The claim that philosophy teaching engenders personal autonomy and develops intellectual autonomy is found, for example, in the case of philosophy teaching in France, where the Baccalaureate system combines cultural hegemonism with an emphasis on the need for students to learn to think, as persons, reflectively and autonomously (Griffiths 1979).[34] In relation to philosophy with children, Lipman puts the argument thus:

> The confusion that a child feels about personal identity, life career, future life style as an adult, family expectations, peer relationships, ambivalence towards education, and so on can be dispelled only if the child is encouraged to reflect upon and analyse the basic direction of his own life.. Philosophy for children is serious about encouraging children to think for themselves, and it will help them discover the rudiments of their own philosophy of life. In so doing it helps children develop a more secure sense of their own identities. (Lipman in Lipman, Sharp, and Oscanyan 1980: 79-80)

Paul (1982: 5) affirms that the strong version of critical thinking is 'ultimately intrinsic to the character of the person'. He emphasises the importance of reciprocity, of sympathetically entering into the world view of one's opponent, a position which both strengthens the hermeneuticist claim and presents it with a difficulty - for the whole point of individual rootedness of perception is that one sees matters uniquely, as no others can. This model of critical thinking can be seen as analogous to that of

empathy or 'sympathetic re-enactment' in the study and teaching of history; and it also resembles the 'ideal speech setting' and 'communicative competence' theory of Habermas (see chapter 5).

The importance of the concept of personhood is present in claims for attention to philosophical auto-biography, 'narrative self-constitution' (Schechtman 1996) and moral agency (Johnson 1993). It is present within the canonical claim (chapter 6) and in the concern with reflexivity in teacher thinking. [35] Notions of the body-self and embodiment form a central, conceptual criterion of personhood within the hermeneutic perspective (Atkins 1988, Clark 1997, Merleau-Ponty 1962). With reference to subject disciplines, hermeneutic claims are made by geographers concerning the inescapable partiality of one's view, including 'situated knowledge' (Harraway 1996, Gregory et al 1994: 9). There is support for the claim from philosophical neuro-science, which identifies as *Descartes' Error* the failure to acknowledge the hermeneutic location of the person as a neuro-biological 'self' (Damasio 1994, Clark 1997).

Assiter (1994) argues for the Aristotelian, corporeal notion of the person. [36] She proposes a competency model of the person construed broadly as underlying characteristics and ability to transfer knowledge from one context to another. This is to be preferred over more traditional models of persons and thinking in higher education.[37] Coia (1992, 1993) sees concepts of the person, and theories of personal identity, as central to personal and social education, and stresses the importance of philosophical autobiography. [38] Some philosophers and writers emphasise more the benefits of, and scope for notions of multiple identity or personality (Hacking 1995), 'drafts of identity' (Dennett 1996), or personal discontinuities of identity (Parfit 1988), including those found in computing (Harraway 1991, Plant 1997, Ryan 1995b, Turkle 1996). [39] A more general pedagogic claim for teaching philosophy which relates to becoming a person, as advocated by Lipman (1992) involves joining in philosophical enquiry with others. Such a case can be supported by the social constructivism of Vygotskian research, which concludes that learning often occurs best when children combine socially, in undertaking *assisted learning*, which is *scaffolded* by peers and adults, within a community of enquiry (Berrill 1990, Cole 1985, Lipman 1991, 1996).

These arguments concerning the person, and personal growth, are also often linked with proposals for developing dispositions and virtues (see chapter 5). Claims concerning the contribution of the philosophy and the pre-philosophical curriculum to the development and flourishing of the person are therefore central to the argument of this thesis.

13. Claims of transfer

I turn now to examine in detail a series of claims which develop the notion of transferability, cross-domain thinking in my view being central to any project concerned with philosophical and pre-philosophical education, as will be further argued in chapters 4 and 5.

Do claims for teaching philosophy, or critical thinking as a separate subject involve, necessarily, at least a weak assertion of transfer? For a psychologist like Sternberg (1987: 258) the transfer claim is 'the fundamental question' in the teaching of thinking. Like 'snake oil', it merits considerable scepticism (Sternberg and Bhana. 1986). The matter has been much studied in relation to critical thinking (Nickerson 1985, Norris 1992a, Maclure and Davies 1991). The concept of a 'transferable' liberal education can be argued to be implicit in the work of a number of philosophers of education, including Hirst (1974), White (1973) and Bailey (1984), all of whom clearly believe that the important effects of education carry over into adult life.

14. The claim of transferable liberal education

Bailey (1984) claims that a liberal education is one which enables people to understand the choices they have, to make those choices and to pursue their chosen paths in a social world. There should be an understanding of different ways of life, or forms of activity which might be valued for their own sake; and an understanding of the different forms of knowledge which structure human thought and provide the basis for critico-creative thinking and the development of rational (or more extensively personal) autonomy. For Bailey it is generalisability, what cognitive psychology has

traditionally called *transfer of training*, that is the benefit most often sought and gained from thinking in single subjects or discourse. [40]

The extent to which thinking is subject-specific within originating forms of knowledge and activity and therefore untransferable, or whether there are transferable thinking skills, has been much debated within the critical thinking movement (Hager 1991, Hernstein et al 1986, McCarthy 1996, Norris 1992b). The argument that the potential for generalisability often originates within the subject discipline will be presented in some detail in chapter 3. It claims that, generally speaking, most thinking which is of value to us begins as domain-specific - although this is not to say that meta-cognitive disciplines like logic or philosophy itself cannot emerge in their own right. Many writers claim broad benefits of transfer arise from philosophy teaching with children (Evans 1976, Fields 1995a, 1995b, Lindop 1990, Robinson 1995, Whalley 1980). Whalley (1987) asserts, for example, that there are six such benefits. Children taught philosophy in school learn to reason; they discuss matters which arise out of but are not officially part of the curriculum; they are made aware of problematic issues; they discover what co-operative argument can achieve; they encounter an antidote to curriculum fragmentation; and they learn to have confidence in thinking for themselves.

The proposition that meta-cognitive thinking, *thinking about thinking*, can be taught is a peculiarly important feature of philosophy teaching itself. The claim is sometimes made that philosophy, as the most general of subjects, is the most adaptable to particular needs whatever the nature of the enquiry. As Fisher (1990) points out, philosophers find there is a regrettable lack of empirical research which could support this unexceptionable claim. [41] Nevertheless claims for teaching philosophy, a pre-philosophical curriculum, higher order thinking and skills continue to stress the benefits of transferability that will accrue. There is a continuing assumption among educators that the teaching of philosophy confers generalised intellectual, economic and other benefits on the elites it selects, trains and serves - even if this belief is not much articulated or made explicit. Barrow (1991) observes that such benefits were invoked in traditional claims for the transferability of a classical education. [42]

15. Linguistic transferability

Those advocating the Humean and Austinian approach to philosophy teaching, it was suggested in chapter 1, have seen the subject as a journeyman's tool for the second-order clarification of philosophical and linguistic confusions. However, the linguistic claim may also be seen as asserting a transferable system for training the mind. A linguistic philosopher attempting to explain philosophy to an educationist might describe 'philosophy' as the subject discourse of meta-cognitive competence. Inter alia it is the subject discipline which deals with the epistemological, aesthetic, moral and metaphysical questions which surround thinking, while through its association with logic acting as a technical resource. That technical usage has been an important one in twentieth century linguistic and 'ordinary language' philosophy as, say, exemplified in the work of Austin. It has its parallel, applied forms in critical thinking, argumentation theory (Secor 1987); and in linguistics and English studies, in models of how multi-dimensional written argument develops (Berrill 1990), and of 'dialogic rationality' in rhetoric (Myerson, 1994).

The Austinian approach is found in explicit form in the pedagogy of A level philosophy teaching in England and Wales. The *Institute for the Advancement of Philosophy with Children*, with its emphasis on procedural language, works on 'transfer' within that linguistic philosophy tradition. The teaching of informal logic courses in the U.S. directed towards forming the habits of logical thought, has a visible provenance in the traditions of linguistic and analytical philosophy (Govier 1987, 1988; Groake et al 1997, Halpern 1995ab, Hughes 1996). [43] Hughes, for example, combines treatment of problems in the philosophy of language and epistemology with teaching a conventional programme of critical thinking exercises. In Europe, particularly in the Netherlands, a new field of argumentation studies has originated from the discipline of linguistics. It claims transfer through the detailed analysis and clarification of linguistic form in argument, and the examination of participants' assertions, when the resolution of personal as well as philosophical problems can be achieved (Van Eeemeren and Grootendorst 1984, Van Eemeren 1987). [44] The emerging genre of philosophical counselling makes somewhat similar claims, and demands on competence in linguistic technique (Rahav 1996).

16. The claim of transfer across subject areas

Some thinkers believe that subjects are in fact very much self-contained in their discourse and transferability is therefore limited Nussbaum (1986, 1988), McPeck (1990; chapter 4). We live and think as persons within particular continuing traditions of discourse or language, 'finding a voice' as poets or writers, or as teachers (Grumet 1990) within a tradition and personal, hermeneutic location. [45] Even an invented language will eventually come to develop its own distinctive, hermeneutically unique character, with its 'parole' aspects in speech and orthography, like that of any other 'living language' (Saussure 1988). [46]

Bridges (1994) observes that traditionally philosophers of education have discussed the claim for general thinking skills which lie across the curriculum with varying degrees of scepticism and hostility. He finds that within the 'thinking' traditions of critical, creative and problem-solving thinking, 'all thinking is thinking about something'. However, what one is thinking about and the kind of knowledge one is dealing with make such a significant difference that thinking cannot be regarded as the same activity in different places. In particular, success in one area or domain of knowledge will not be sufficient to enable a student to transfer that thinking ability to another domain, as Barrow (1987) also points out. [47]

A central tenet of the critical thinking movement has been that thinking is transferable. However, this has been repeatedly challenged in the 'Great Debate' which has gone on between the principal critic of critical thinking, McPeck, and his opponents (McPeck 1990, Quinn 1994). McPeck's argument is conducted in terms of philosophical logic. His much-cited critique of the transferability claims of the critical thinking movement asserts:

> It is a matter of conceptual truth that thinking is always about X, and the X can never be 'everything in general' but must always be something in particular. Thus, the claim, 'I teach my students to think' is at worst false and at best misleading. (1990: xiii)

McPeck parts company with many critical thinking theorists over the role of the disciplines, in emphasising the central importance of the particular disciplines. He sees the disciplines as 'structured embodiments of the simple forms of life which gave rise to them which attempt to provide progressively more sophisticated insights' (40).

The relevance of disciplinary knowledge is grounded in relationships between the disciplines and everyday life. He therefore claims on two grounds that a traditional, discipline-based education is the best way of teaching critical thinking:

> First, the disciplines, over the millennia, provided many important answers to important problems which used to perplex mankind. Second, through the use of their general concepts, and rich language, the disciplines provide a very powerful set of analytic lenses through which students can come to understand problems, and to grapple with them in rational ways. (34) [48]

On the other hand, if one could only think subject-specifically, there could be no transfer and each subject effectively would be a restricted zone, a private language, temporarily public and accessible only to those at that moment working within it; and a meta-subject such as philosophy itself could never have emerged from theology (see again chapter 1).

17. The claim concerning transferable meta-competence

Most of those wishing to see a philosophy and pre-philosophical curriculum introduced argue, however, that a distinct body of transferable meta-competences can be isolated and taught. Bridges (1994) gives the name of *transferring skills* to the ability to function in a metacognitive way. [49] Transferable skills, on the other hand, are those core skills such as word processing which can be deployed with little or no adaptation, in a variety of social settings or contexts. Cross-curricular skills, such as the ability to interpret a graph, are identified by a feature of applicability across a variety of cognitive domains such as school subjects. Meta-competences, or meta-cognitive thinking (or transferring skills) are transferable across vocational or professional areas. Transferable dispositional skills have been claimed to be achieved, with business professionals by Senge et al (1994), with health professionals by Winter (1992), within nursing education by Benner (1994), and with early years teachers by Katz (1993). Gotz (1989) makes the philosophical case for ethical transferability, arguing that moral skills are dispositions acquired through training and built on talent just like sporting skills.

18. The empirical claim for transfer

Having surveyed claims for cognitive benefits from critical thinking in the subject areas, the social studies specialist Newmann (1990) offers 'the optimistic conclusion that just about any kind of thinking can be taught to some degree'. Belmont and Butterfield (1977) find that 'near' transfer is relatively easy to teach, but 'far' transfer is extremely difficult to achieve through teaching. Often an individual who has learned a skill in principle fails to apply that skill. Similarity between the learning and the target contexts is no guarantee for transfer. Transfer of learning in problem-solving is most likely to occur when an explicit hint is given that two problems are related, and when the target problem is easier than the initial problem. [50] Schecht (1989), after an extensive review of the research, concludes that thinking about significant matters cannot be distilled out into a wholly generalisable set of techniques:

> Much can be done to develop skills in recognising, analysing, and evaluating arguments - skills that are generally applicable regardless of subject matter. Students can learn something about the nature of argumentation; they can learn to distinguish different kinds of arguments and to understand the criteria relevant to determining the cogency of each; they can learn to identify and to be alert for some of the more common fallacies in reasoning. But substantive knowledge is also essential in many facets of argumentation - knowledge which may be general or rather specific. In assessing arguments, such knowledge is needed in determining the acceptability, relevance, and sufficiency of premises (138). [51]

Siegler (1991) advocates a similar perspective. He points out that under Piaget's influence great emphasis was placed on processes such as accommodation and assimilation that were believed to influence all of cognition. However, research has shown that a child with sufficient domain-specific knowledge can generate more advanced performance than an adult with less knowledge, thus demonstrating the importance of both domain-general and domain-specific thinking. The current challenge would now be to illustrate how general and specific processes interact to produce cognitive functioning (259). Donald (1985, 1988, 1992) offers an empirical working model of how particular categories of thinking occur within specific and general thinking in the main subject domains such as science, technology and

languages. She identifies six main, transferable categories of thought process: these being description, selection, representation, inference, synthesis and verification (Appendix 29). These forms of thinking are all relevant to subject disciplines, but Donald finds that there are significant differences of usage and emphasis between various subjects in the extent to which they appear. [52]

19. The transfer through problem-solving claim

Many intervention programmes have advocated problem-solving as the best and most practical pedagogic approach to transfer and learning. These claims are of some importance because they lead to the most visible forms of practice in schools through the adoption of materials. [53] Claims on behalf of problem-solving usually claim improvements in attainment which arise from the transfer effects of teaching a particular technique.

One long-standing research programme in Britain claims benefits in classroom achievement in children's problem-solving. Adey (1989, 1991), Shayer (1991) and Shayer and Adey (1989), have a neo-Piagetian approach to 'cognitive acceleration' in science (CASE) and make substantial claims of transfer. They claim that the teaching of general thinking skills within science lessons as a form of problem-solving brings general improvement in examination attainment in the later school years, not just in science but in cross-domain transfer (Shayer and Adey 1989). [54] The CASE results are of particular interest for the extent to which inductive thinking in one curriculum area, namely science, is claimed to be broadly transferable to other subjects. [55] The specific CASE claims for 'cognitive acceleration' have, however, been challenged by Desforges and Brown (1979). Furthermore, the Piagetian, genetic epistemology on which such approaches are based has been severely criticised by Donaldson (1979), Matthews (1994) and Meadows (1982). [56]

De Bono (1991) and Feuerstein (1979, 1980) are also prominent among those making claims concerning the teaching of generic techniques of argument. [57] De Bono emphasises the links between creativity and the transfer involved in problem-solving, continuing a tradition in 'creative and divergent' thinking begun by Torrance (1973). [58] He argues that his concerns are complementary to those of Popper in reviving a

traditional distinction between the logic of proof and the logic of invention or discovery, in his distinction between vertical and lateral thinking. [59] Feuerstein's *Instrumental Enrichment* programme claims to have achieved 'far' transfer with low-achievers. Blagg et al (1988) in a review of the *Somerset Thinking Skills Course*, based on the Feuerstein materials, concluded however that there was no evidence to imply that Instrumental Enrichment had more than a minor transfer influence on the work or study skills of mainstream, low achieving UK adolescents. [60] The problem has been to know how far 'bridging' to other subjects and contexts, the transferability of 'generalisable' thinking skills, reliably occurs following intervention. [61]

The examination results for the various specialist philosophy courses offered to older students in different countries suggest prima facie that some transfer of learning occurs within the subject; but no specific, systematic studies of its transfer effect on other subjects have yet been undertaken. Research evidence collected by the *Institute for the Advancement of Philosophy with Children* has claimed that improvement in cognitive attainment occurs through its programmes (Lipman et al 1980); and others sympathetic to the approach have endorsed these claims (Coles and Robinson 1992, Fields 1995b). [62]

20. The claim of cross-domain transfer

The view is taken in this thesis, and amplified in chapter 5, that thinking may occur in modalities other than language (Rolls 1997, Damasio 1994). The *nativist* perspective in evolutionary biology argues that psychological mechanisms have been structured into domain-specific modules by evolutionary history. Language is seen as a particular case of this instinctual-seeming phenomenon (Pinker 1994), as are human fears and phobias, parent-child interaction and partner selection (Ohman 1997: 253).

Siegler's (1991) conclusion concerning specific and cross-domain thinking in the *linguistic domain*, based on a survey of the empirical studies, is extremely important in relation to the debate about transfer.

> Domain-specific and domain-general properties can work together to produce both performance and cognitive change. It appears that across a variety of domains, strategy choices are produced by a domain-general process operating on domain-specific knowledge. (Siegler in Light 1991: 259)

There is evidence that cross-domain, cross-intelligence and even cross-sensory 'transferable' thinking features in some of the most creative human thought and achievements. Kornhaber and Gardner (1991) provide examples of thinkers who have worked across different types of intelligence to come up with unusually new, or creative contributions to thought. [63] Some deny, however, that cross-domain thinking can be taught. In a critique of Gardner's position, Bresson (1991) explores the question of the relationship between specific types of intelligence, knowledge and the procedures of intellectual activity. He finds that transferable critical thinking cannot be directly taught, although the teacher could set up a situation in which it might occur. [64]

> Critical thinking constitutes procedural knowledge and remains implicit; only its effects, its explicit and conscious results -not the process involved- are judged. Mathematical discoveries are a good example; many mathematicians have written about the role intuition plays and about a moment of surprise following their own discoveries (he cites Poincare and Hadamard)... There is thus no form of direct learning which can develop critical intelligence. One can only try to induce the spontaneous acquisitions of these ways of thinking. (Bresson 1991: 174-5)

The various kinds of intelligence or critical thinking are simply possibilities for directly applying what is known already; and for comparing different kinds of knowledge, combining them, drawing conclusions, developing analogies and inventing. Transfers between specific kinds of intelligence do take place when relationships established in various fields are analysed in abstractive systems such as artificial intelligence, when a new kind of knowledge is brought into being. Donald (1992) in her taxonomy puts forward an analogous notion of 'connections between connections' (Appendix 29). The account of cross-domain creativeness given by Bresson is not unlike accounts of *stochastic process* and thinking, which will be discussed in chapter 4 in relation to counter-factual thinking (Hager 1995).

Educationists caution against high expectations of transfer. A survey for OFSTED by Adey and Fairbrother, *Learning Styles and Strategies*, expresses doubts about the value of the concept (1995: 22). An influential project in UK higher education concerned with the transferability of thinking, the MENO/UCLES project, specifically reserves its position over whether transferable thinking skills exist at all. [65] Despite some research and theoretical reservations, I agree that the conceptions of transfer should place equal emphasis on domain-specific and general approaches. It will be argued that any *pre-philosophical curriculum* must be built initially around subject teaching: but that philosophy should also be taught in its own right as the subject which, although originating and grounded in other disciplines, specialises in transferable meta-cognition and enquiry (Moser 1996: 406-7, see chapter 3).

21. The claim to develop intellectual and ethical dispositions and virtues

The argument that our dispositions, virtues and even political behaviour can be significantly influenced by the transfer effects of a philosophy and pre-philosophical curriculum is an important one. Claims concerning social and political hegemony are among some of the most far-reaching that critical thinkers and philosophers, lecturers and teachers, have to address - since they are central to the role of the school or college in a society.

Many of those enthusiastic to see a philosophy and pre-philosophical curriculum taught in schools and colleges identify its potential contribution, usually through the transfer of training, in the area of values education and the education of dispositions and virtues (Sharp 1984). There has been increasing interest in the virtues among philosophers; and in the UK in values education and the thinking which accompanies it (Haydon 1990, 1996, 1997; OFSTED 1994a, 1994b). In the US there are similar developments. Lipman and Sharp (1978a) argue that philosophy with children produces virtuous intellectual dispositions; and that through philosophising children learn to improve their moral judgements: to develop techniques for making such judgements, and thereby learn to 'love and care for' such techniques. The claim that philosophical thinking can be seen as virtuous activity by A level students is made by Almond (1990). She argues that in order to pursue objects philosophically ,'a moral

commitment' is required on the part of the enquirer to the truth and to 'those moral virtues that the pursuit of truth entails'. Her list is similar to that of the critical thinkers: 'honesty, openness, respect for other persons as centres of thought and feeling, and the courage or willingness to pursue an argument to its conclusion, whatever that may involve' (20).

Initial emphasis on virtuousness in correct procedural thinking has, however, been progressively expanded into a concern with broader dispositions, moral and ethical virtues. Ennis (1962, 1991, 1995) reconstructs his definition of critical thinking so as to stipulate a disposition to think critically which is established as a habit, or trait of character (see also chapter 5). [66] Paul (1982, 1990) emphasises the importance of the dispositions, for instance empathy, in his conception of 'substantial' critical thinking. Resnick (1987) argues a deontological case. Facione and Facione (1994), in introducing a state-wide approach and testing instrument for improving the performance of California school-children, claim to be able to teach and assess dispositions towards, and even a 'passion for critical thinking'. [67] Bridges (1994) postulates the existence of *transferring meta-competences* which have important dispositional, affective dimensions:

> The sensitive and intelligent discernment of similarities and differences between one social/ cognitive setting and another ...(added) to whatever cognitive equipment it is which enables someone to modify, extend or adapt a previous repertoire of response to the different requirements of the new situation; to the attitudes or dispositions which support both of these - perhaps a combination of the receptiveness and sensitivity which is necessary to the first of these requirements with the confidence or enterprise which supports the second. (1994: 13)

The meta-competences involved in sensitive responsiveness and adaptation in an inter-personal setting, for example, involve very different skills from the usual technical skills of negotiation. Winter (1992, 1994, 1996) in training the 'competence' of health service professionals in the United Kingdom setting, and Benner (1984) in relation to 'reflective' nursing education in the U.S., make similar claims to engender transferable social thinking and dispositions.

There are a number of counter-arguments to the claim that philosophy and pre-philosophy can be used to teach the dispositions and virtues. It can be argued

ineffably, along Wittgensteinian lines, that philosophy and thinking 'leaves everything as it is' and so there is no need to demonstrate that dispositions or virtues result. Teaching is by definition supererogatory. Or it may be argued that philosophy teaching does affect the dispositions, but its effects cannot be easily predicted and are just as likely to be deleterious as beneficial, for instance in precipitating adolescent depression (Ward 1983, see chapter 8). [68] Thirdly, it may be argued that the 'ironism' necessary to thinking philosophically may inhibit the disposition to action (chapter 8).

Teaching philosophy, critical thinking and the *pre-philosophical curriculum* should, I agree, bring cognitive and affective benefits related to the formation of dispositions. But there are pitfalls in the uncritical teaching of the dispositions, or values education (see chapters 5, 7 and 8). The complex history of claims concerning affective, as distinguished from cognitive, dispositions is traced in chapter 5. The argument will be advanced there, and in chapter 4, that Aristotelian 'ready-wittedness' as a disposition can be linked with a 'possible worlds' account of wit and cognitive emotion. Dispositionality will therefore emerge as a key concept in this study, relating not only to causation in the non-human, material aspects of the world but also to moral and ethical life in conditional and possible worlds.

22. Hegemonic, elitist and democratic claims

Evidence from the history of philosophy teaching in different countries supports the claim that teaching philosophy to selected students can assist the establishing or maintenance of cultural and political hegemony, and in both dominance and emancipation (Griffiths 1979, Newcombe 1977). The case is also strongly made in relation to critical thinking (Bridges 1994, Flanagan 1993, Haynes 1991, Newmann 1990, Splitter and Sharp 1995, Weinstein 1990).

Many countries provide exemplifications of how philosophy teaching in the schools can be used to promote political change, illustrating the Gramscian argument that political hegemony is pursued in totalitarian and democratic regimes through philosophical education (Entwistle 1979, Gramsci 1971, Griffiths 1979). [69] In Eastern Europe and the Soviet Union, for nearly seventy years the philosophy of

Marxist Leninism was taught in the school and higher education with a training and indoctrinatory rationale (Kaltgakhchian and Petrov 1964). Western European countries such as France and Spain can be seen as having frequently used philosophy teaching as an aid in the shaping of the polity, and in the selection and maintenance of meritocratic, public and professional elites and intellectual traditions (Giroux 1988, 1989, 1994 and see chapter 8). Flanagan (1993) argues for critical thinking as providing an emancipatory pedagogy to replace apartheid. As Almond (1990: 21) warns, to teach philosophy may carry some risks as the great competing ideologies of marxism and liberalism illustrate: 'It may also, however, be an agent for change in the world'.

Justifications for teaching philosophy for its contribution in the young to an understanding of, and disposition towards practising the democratic way of life, have been traditionally emphasised by philosophers - from the Greeks to Dewey. However, practice seems often to have concentrated on the education of élites, even when the provision of democratic education has also been in mind. [70] The central contribution of the study of philosophy in the formation and education of élites can be identified in many educational systems (Griffiths 1979). [71] Such approaches imply that philosophy teaching should be used for the education and training of élites, and that it is therefore a semi- exclusive purview of the intellectual and power élite. The élitist claim for philosophy teaching has not been much announced or discussed as such, even though it has played a significant role in many, including totalitarian regimes. The claim may be characterised as asserting that the teaching of philosophy helps us to select members of an élite, forming in them attributes of character and intellect appropriate to the leadership role which they will assume in their society. It will be shown that philosophical and pre-philosophical curricula have been used for the training and formation of both democratic and anti-democratic élites. Issues around potentially desirable or undesirable outcomes will be addressed in chapter 5.

Some argue a combined elitist claim, that the linguistic, moral, cognitive, and other benefits which arise from the teaching of philosophy and higher order thinking can combine to confer a benefit of empowerment, increased capacity to act in the world, to control one's own life or to achieve cultural or political hegemony over the lives of others (Shapiro 1984). As Griffiths (1979) shows, the geographical incidence of philosophy teaching in mainland European schools tended to reflect patterns of cultural and political dominance arising from the imperialism of the 18th and 19th

centuries. French cultural hegemony influenced the philosophy teaching of Spain, Portugal and their colonial possessions, and countries like Italy, Egypt and Malta which were subsumed under the Napoleonic Code and its curriculum reforms. The evidence for this claim is well-established in the comparative education literature; and is reflected in discussion of the canon in philosophy or pre-philosophy.

The broad democratic claim for teaching philosophy and pre-philosophy can be regarded partly as an empowerment, or hegemonic claim. Epistemologically and pedagogically, it proposes that philosophy teaching, usually on the Socratic model, will uncover dormant assumptions, reduce prejudice and engender democratic rationality. Solutions to problems in the sense of clear answers may not always be forthcoming, it is argued, but philosophy teaching will contribute to an educationally healthy school ambience; one in which tolerance, rationality and democratic practices are featured.

> When children are encouraged to think philosophically, the classroom is converted into a community of enquiry. Such a community is committed to the procedures of inquiry, to responsible search techniques which presuppose an openness to evidence and to reason. It is assumed that these procedures of the community, when internalised, become the reflective habits of the individual. (Lipman and Sharp 1978a: 88) [72]

Gutmann (1987) and White (1989b, 1996) argue that rational deliberation, which for Gutman specifically includes critical thinking, is important for democratic education. There is certainly evidence of an efflorescence of interest in philosophy teaching in schools and colleges in those countries which have suddenly had access to new political and social liberties following the collapse of the Soviet bloc. [73]

A democratic claim which emphasises the vocational benefits that can arise from thinking in philosophical mode within, or preparatory to entering the work-place is advanced by some educators. Newmann (1990), for example, argues for higher order thinking as an educational goal closely concerned with empowerment and personal, democratic and economic autonomy. [74] Weinstein (1993b) wishes to know whether critical thinking will help to liberate the mass of urban students, when he urges a new type of 'rationalist hope and utopian vision' addressing social injustice. [75] Haynes (1991) raises the question of whether the critical thinking

movement has tended to take an Enlightenment rather than a post-feminist view of rationality and the hegemony of reason. [76]

The Gramscian position makes education central to the replacement of the dominant ideology in achieving social or political advance, albeit adopting what Entwistle (1978) shows to be an otherwise rather conservative approach to the curriculum and other aspects of schooling. [77] The ideas of Althusser (1984) provide a similar ideological and philosophical framework. Althusser's account of how the relations of reproduction are secured involves the proposition that different 'ideological state apparatuses' may provide, at different times, the main area for hegemonic struggle and debate (53). In the pre-capitalist historical period of the middle ages there was, for example, one dominant ideological state apparatus, the Church, and a theological logomachy that accompanied its dominance. The importance of critical thinking and philosophical study for those arguing in this tradition is conveyed in Althusser's dictum that 'philosophy is, in the last instance, class struggle in the field of theory':

> The ideological state apparatus which has been installed in the dominant position in mature capitalist social formations as a result of violent political and ideological class struggle, is the educational ideological state apparatus. (26)

The territorial disputes over intervention programmes within the 'thinking' or pre-philosophical curriculum in schools and colleges may be seen as a form of this response. Some subject specialisms want to claim canonical hegemony for their subject as the principal site for this struggle to take place, as is shown in chapter 6 for the case of both English studies and science. [78] The claim that the teaching and learning of philosophy should be undertaken for its universalistic benefits, in personal, social and educational contexts, is taken to a logical conclusion in the community-based approach of McCall (1994, see also Turner 1996). The EPIC project for philosophy in the community claims to have brought about empowerment, emancipation, improved moral behaviour and self-assertiveness, and crime reduction among a disadvantaged urban population. [79]

Such arguments can result in the school, college, or university, being seen as the key institution for developing social and political change and philosophical democracy. The view may be Habermassian, concerned with the engendering of the 'ideal speech situation', and consensual truth-seeking. Or it may be more radical in asserting that

through philosophy teaching, ideological assumptions taught as a 'hidden curriculum' or 'invisible pedagogy' will become transparent. On such a view, philosophy teaching becomes a source of empowerment and liberation, helping to reform social and political arrangements by radicalising and politicising students.

One counter-argument to such claims is that the teaching of philosophy and its pre-philosophical foundations, far from being democratically empowering, has contributed just as often in the historical record to the emergence, or maintenance of anti-democratic élites and regimes. The historical evidence needs to be borne in mind, as Almond warns, for philosophy teaching may easily lend itself to ideological abuse, indoctrination, bias and misuse. This perception is voiced within the contemporary critical thinking movement by Haynes (1991), who sees the claim to pursue 'rationality' as a disguise for post-Enlightenment aims of gendered, male hegemony and domination.

Another objection concerns the possibility of indoctrination. It may be objected by rights theorists that advantage should not be taken of the 'imperfect rationality' of children. [80] It may be said that since philosophy teaching cannot help but be ideological its teaching will inevitably involve a strong risk of indoctrination. This matter is discussed in philosophical terms by Siegel (1987, 1988). Others indicate the need for teachers to develop the pedagogic skills for minimum intervention and democratic classroom management in lessons dealing with philosophical issues (Duncan 1972, Stenhouse 1975, Stock 1987).

The claim that the philosophy and pre-philosophical curriculum is capable of the development of intellectual autonomy, political empowerment and emancipation must be conceded. Philosophy teaching can be, and has also been used for indoctrinatory and illiberal purposes; but I agree with Siegel, and with Myerson (1994) that this is less likely to occur where 'dialogic' rationality is a foundation stone of one's pedagogy.

> One must take rationality, and reasons, seriously in order even to raise the question of the possible influence of ideology on the evaluation of reasons. The ideology objection thus presupposes a commitment to rationality. (Siegel 1988: 73)

23. Personal and vocational hegemony

For Bridges (1994) there is a problem about the account of transfer in liberal education given by Bailey and other liberal educators. It is that even relatively successful experience of liberal education as a student would not be a sufficient condition for one's positive freedom or liberation within most real social settings. Bridges therefore wishes to link the theory of transferability through liberal education with work-place learning in vocational education. It is possible to see a broader 'liberal justification' for the pursuit of transferability than the traditionally academic one:

> The idea of the 'educated person' is that of a scholarly individual who has been neither educated or trained to exercise useful skills; who is able to understand but not to act. A well balanced education should... embrace analysis and the acquisition of knowledge. But it must also include the exercise of creative skills, the competence to undertake and complete tasks and the ability to cope with every day life; and also doing all these things in co-operation with others. (8)

The *liberal vocational* claim for the teaching of transferable thinking made by Bridges (1994), and by Winter (1994), can be seen as a variation of the ideological claim. It is associated with the belief that in economies driven by technological innovation and commercial competition, knowledge and ability must be 'transferable'. However such recognition is to be reconciled with the belief, widely held within the institutional culture of higher education, that 'academic freedom' is to do with the 'intrinsic' value of specialised knowledge (Winter 1994: 53).

Bryan and Assiter (1995) are similarly concerned with the vocational 'competency strand' in liberal humanist education but offer a neo-Aristotelian solution. They argue for competency and transfer in thinking conceived along Aristotelian lines as practical knowledge in 'the practice of a craft'. The pitfall of mere 'verificationism' concerning competency can then be avoided, and such a position is also consonant with other perspectives such as that emphasising 'body-self'. [81] Assiter in particular gives education and training in 'competency' in thinking a central position within the curriculum and offers a model of good thinking which she sees as having resonances of the craft guild. Her analysis is of some interest in that it agrees with the feminist

and hegemonic critique of critical thinking mounted by Haynes (1991), while offering an approach which emphasises the physical, cross-domain, and 'body-self' or corporeal nature of thinking. [82] Gubbay (1994) advances a Gramscian and 'socialist' view of transferable skills within the 'new vocationalism'. [83] He advocates curricula which develop a range of theoretically-informed thinking, practical, and social skills. Thinking skills and vocational values will include the willingness and capacity to challenge common assumptions and authorities, while being imaginative, creative and self-critical. [84]

I agree that teaching competency in transferable thinking can be a powerful tool for empowerment and hegemony, for developing the vocational virtues, and more broadly in 'vocationalising the liberal ideal' (Pring 1995: 186). [85] However, I subscribe most strongly to the broader democratic and vocational claim, that the study of philosophy will contribute to the flourishing of a productive, democratic society.

24. Which claims have been most prominent or discernible?

What can be concluded from a review of the teaching *philosophy and the pre-philosophical curriculum* within a broad 'social movement' which has been building in a number of countries? [86] Which type of claim or justification has been the most prominent or discernible? What is immediately observable is that the range of claims for the teaching of philosophy and the pre-philosophical curriculum has been progressively enlarging, reaching well out beyond the conventions of Enlightenment thought, or Anglo-Saxon linguistic and ordinary language philosophy. For example, dispositional claims have been increasingly explored and promoted and an emphasis on values education, virtues and dispositions is increasingly prominent. It is noticeable that the argument for the primacy of philosophy has not been asserted formally, nor has the idea of a unified curriculum offer in *philosophy and pre-philosophy* been explored (see chapter 6). The combining of the teaching of critical thinking together with an elementary approach to simple topics in the philosophy of mind or language stands out, for example, as an unusual experiment (Hughes 1996).

Explicit justification of the teaching of philosophy or pre-philosophy and higher order thinking, on the grounds of their importance to a democratic or economically

flourishing society has frequently occurred. Claims which are communitarian, essentialist, hegemonic, and emancipatory have all been educed to support such a case. Informed by the philosophy of John Dewey, the egalitarian approach of Matthew Lipman and the *Institute for the Advancement of Philosophy with Children* represents a particularly strong version of the democratic and communitarian claim. A democratic tradition of intervention has been established by those who, like Feuerstein (1980), have worked to improve the thinking of the majority and the intellectually disadvantaged children in the public schools system. [87] This contrasts with the views of Rorty (1989: 73) and others who think that it is a mistake to look at philosophical reflection as an instrument for implementing 'liberal hope' (chapter 8).

The claim for cognitive benefits, usually involving some form of transferable thinking, has been frequently cited. However, that claim has sometimes placed the philosopher in an Austinian or journeyman role which fails to take account of the broader philosophical and pre-philosophical agendas. [88] The emphasis on linguistic clarification is mistaken in my view. It leads to a mistaken concentration on intervention, problem-solving and thinking skills programmes promising quick results, but resulting in a pedagogic vacuum in which more philosophical conceptions of a *philosophy and pre-philosophical curriculum* are neglected.

However, as Weinstein (1993a) points out, the debate has been reconfigured in the past decade, by a wave of criticism concerning the claims and assumptions of traditional critical thinkers and philosophers. Swingeing critiques of critical thinking and philosophical practice have been mounted by a range of writers including Green (1994), Kincheloe and Sternberg (1993), Mclaren (1996), Siegel (1993) and Weinstein (1993b). Some have questioned whether acceptance of a pluralism of post-modern rationalities is to be welcomed (Green 1994). Others like Haynes (1991), Assiter (1994) or Thayer-Bacon (1993: 95), focus on the issue of anti-feminist 'bias' in the critical thinking movement. They stress the implications of situated female, hermeneutic knowledge for thinking (Harraway 1991).

Weinstein (1993), in reviewing this range of developments, concludes that Paul's (1990) emphasis on 'classroom thoughtfulness' in relation to bias, ethnocentrism, and sociocentrism, and the need for substantial and empathetic thought, may prove more sustainable in the new setting than the stance of McPeck and 'more traditional

thinkers'. [89] He wishes 'inclusion' to be a major objective of the critical thinking movement within US national educational policy.

> Will the limitations of conservative educational practices be replicated in educational reforms replicating critical thinking; or will the urban under-class, the disenfranchised and oppressed, the non-literate, the non-technological cultures be included? (Weinstein 1993a: 17)

25. A rights or curriculum entitlement claim

Arising from the 'strong version' of claims identified in the present chapter, a rights claim can be derived for teaching philosophy and a pre-philosophical curriculum. At its simplest, such a claim might aim for parity of treatment, as in the argument for the right to offer and receive specialist philosophy teaching put by Ward (1983). He asks whether given the wide range of nearly one hundred A levels already on offer, would it not be natural and equitable to add philosophy? [90]

A persuasive rights claim can be founded on the notion of a curriculum 'welfare right' (Wringe 1981). For if *philosophy and the pre-philosophical curriculum* are as important as the claims for teaching them suggest, children will have an entitlement or right to be taught such a curriculum, and teachers and lecturers an obligation to provide it. A 'welfare' claim to the right of a curriculum offer in the teaching of philosophy and thinking will argue that it is central to an individual's intellectual welfare and flourishing. [91] The withholding of access to the philosophy and pre-philosophical curriculum would then be a deprivation of such importance as to constitute the denial of a welfare right (Wringe 1981). A different form of meritocratic rights claim could be based on the case for offering philosophy or pre-philosophical teaching only to that selected élite of children likely to benefit cognitively or dispositionally. If the right was confined in this way the status of, or need for a *pre-philosophical curriculum* as a universal entitlement might then be questioned. [92]

The position taken in this thesis is that there are compelling reasons why teachers should develop a school or college policy for a philosophy and pre-philosophical curriculum. The need for such an approach, and good reasons why it might take a

particular form, responding to a strong set of claims, have been adumbrated in this chapter.

The argument of chapters 3, 4, 5 and 6 will be that the transcendental, possibilist, canonical and primacy claims, when combined, amount to a formidable case for universal entitlement to a *pre-philosophy and philosophy curriculum.*

Surprisingly, neither the philosophical literature on children's rights, nor the literature on philosophy for children have been concerned with the intellectual rights of access to a pre-philosophical or philosophy curriculum. An exception to this is the case for a curriculum entitlement proposed by Craft (1991), who argues that in order for children to be enabled to learn they need analytical, intellectual skills relevant to problem-solving. This will be discussed in chapters 6 and 7.[93] There are important implications arising, too, from the claims for ethical education. The growing tendency to link critical thinking with the major virtues of character, for example, could make the entitlement to moral or 'values education' a more prominent issue than it has been (see chapter 5).

What might be involved in designing and implementing such a curriculum reflecting a combination of claims within the context of a canonical National Curriculum, and a whole school or college policy, is discussed in chapters 6, 7 and 8.

Notes to chapter 2

1 It was on the basis of this type of argument that many educators welcomed the introduction of A level philosophy (Thornbury 1984).
2 For instance, it may be pointed out that our philosophical tradition has broadened in recent decades to include many new areas of applied philosophy. The growing importance of applied philosophy in cosmogony, socio-biology, artificial intelligence, justice, animal rights, medical and business ethics might be mentioned. There has been considerable synergy between philosophical logic and computing, developed on foundations provided by Russell and Frege who sought to give mathematics greater security by founding it on notational logic (Pearl 1988).
3 The *pre-philosophical curriculum* is therefore the term used most frequently in this thesis for what precedes the *formal* teaching of philosophy, which I consider can begin for most children at about sixteen years.
4 Notions particularly associated with the poets of the romantic movement, such as Wordsworth, Goethe, and Fichte (Evans 1940).
5 Lipman (1991: 14) also sees himself as having been imbued with the child development ideas of Vygotsky from 1939 onwards, but in respect of the social

origins of thinking rather the cognitive social learning that Vygotsky characterises as 'proximal development'.

6 Psychological studies of children's 'magical' thinking relevant to Lewis's notion of magical 'ersatzism' in counter-factual thinking in 'possible worlds' are discussed in chapter 4.

7 'Even as Tylor was wrong in speaking of the 'savage philosophy' as that which concerns the mystic representations of primitive society, so also one cannot speak, other than by metaphor, of the philosophy of the child' (Piaget 1933: 534). However, these early philosophical experiences of puzzlement or awe which occur can be seen as examples of Scheffler's (1991) 'cognitive emotions' (see chapter 5). See Demetriou and Efklides (1987a, 1987b) for an integrated model embracing formal and post-formal thought, structuralism and neo-Piagetian theories.

8 Ward's (1983) article is valuable as a general survey of the issues including the contemporary reception by professional philosophers of the A level proposal.

9 Warnock (in Davies et al 1988: 57) argues: 'I do not think it possible to study philosophy profitably without entering fairly deeply into the history of the subject, and for this there is not time at school, nor could it be a subject that would interest more than a few pupils. Instant philosophy, philosophy that springs into being on the television screen, is fun, but it can hardly be serious.'

10 It is partly for this reason that I wish to characterise most of what goes on in schools as *the pre-philosophical curriculum.* However, I am convinced that pre-cognitive philosophical thinking does occur in the young in the form of the philosophical apprehension of the ineffable, 'cognitive emotions', 'body-self' and neural intimations of intellectual possibility (see chapters 4 & 5).

11 Assiter (1994) uses an Aristotelian argument for arguing the place of thinking in a vocational education curriculum (see below). The Aristotelian cum Thomist case can be inflected in various ways. See Buchmann (1989) and Greene (1991a, 1991b).

12 'Previously, alone in the garden at Pembroke Lodge, Russell had speculated a good deal about things he did not know, and could not know: what had his parents been like? was his mother really wicked? Why did his grandmother tremble at any mention of insanity? were his grandmother's religious beliefs true? On some of these questions he might have opinions, on others he could only weave fantasies, but to none of them could he know for certain the right answer...The beauty of geometry was that the truth of a proposition was not just asserted, it was proved. The idea that something - anything - could be known in this way was delightful, intoxicating' (Monk 1996: 26).

13 Some of those committed to the teaching of argument 'as a primary act of mind' have therefore been anxious not to lose sight of its affective aspect. They have been uncertain however whether, in Searlian terms, argument is 'non-feeling', neutral, or 'locutionary' only (Mitchell 1992a).

14 This point is not a purely philosophical or abstract one. The *Framework for the Inspection of Schools in the UK* (OFSTED 1994) seeks evidence of children exhibiting a sense of wonder and curiosity is as measure of a successful lesson.

15 Attention to the pure truth is what Scott (1989: 26) calls *cultural accountability*, as one of four forms of accountability in higher education.

16 See chapter 8 for a fuller discussion of 'ironism'.

17 The philosopher Radford (1996: 4-5) gives an account of such an experience, which occurred to him at five years. For a fuller discussion of this matter see Kennick (in Edwards 1967: 181-3). The problem can be linked with the preoccupations of Schlick and the early Viennese logical positivists and is reminiscent of Keat's definition of poetry as the attempt to describe the taste of a peach. Our sense of taste

tells us exactly what makes up 'peachness' but we cannot easily find a description in ordinary language.

18 An *aporia* is defined as a difficult problem that arises when we are trying to extend our knowledge and seriously impedes our progress, especially when there is an antinomy of equally strong arguments for and against a particular solution (Dancy and Sosa 1992: 19). Lodge (1992) describes its literary use in Conrad, Beckett and Fowles, in its Greek meaning of a 'pathless path'. The associated use of the trope of *aposiopesis* also frequently occurs - as when a narrator breaks off in mid-sentence (219-22). Aporia is an effective aesthetic and didactic device, familiar examples being Hamlet's soliloquy (Lodge 1992: 219) and Frost's (1955: 78) poem, The Road Not Taken (see also chapter 4). Aporia may also play a part in wit (see Thornbury 1998 and chapter 5).

19 Wittgenstein observed 'Philosophy leaves everything as it is' (*Philosophical Investigations*, (124: 49e), although earlier he had written 'What we cannot speak about we must pass over in silence' (*Tractatus Logico-Philosophicus*, prop. 7). The position, among many others, is satirised in Benjamin Hoff's (1982) *The Tao of Pooh.*

20 As Almond (1990) puts it, philosophy is left, then, with what may well be the most resistant questions to the techniques of resolution, available to human beings (22). Lipman, Sharp and Oscanyan (1980: 36-7) provide a list of the large questions that children raise (e.g. What is space, identity, matter, meaning, value, reality, life and death?) in defining metaphysics as 'philosophy at its most comprehensive. It involves issues of maximum generality.'

21 Protagonists argued variously for a narrow approach in 'informal logic' teaching (Govier 1988); for critical thinking as 'the correct assessing of statements' (Ennis 1962: 83), and as 'a tendency to exercise the proficiency' (Ennis 1979: 17). For the stages of the development of his position, see Ennis (1962, 1979, 1987, 1991, 1994). For an approach to critical thinking which insists that thought is context-specific to subject teaching see McPeck (1981, 1990).

22 See Atkins (1988: 437-8), Gallagher (1992), Nussbaum (1986) and Rorty (1984) for hermeneutic discussions of this point. *Hermeneutic* is used in the sense of the term brought into philosophy from theology by Dilthey in the 19th century; as the discipline that is concerned with the special methods of the human studies, of *geisteswissenschaften*; and in the broad sense adopted by Heidegger of general metaphysical purport (Heidegger 1962, Hekman 1986). See Perkins (1984) for a psychological view on whether cognitive skills are context-bound.

23 For example, Grossteste and other scholastic philosophers fine-honed the processes of argument in such a way as to provide a conceptual tool to assist 13th century scientific endeavour (Leff 1958: 186-9).

24 Chapter 1 identified how philosophy emerged from its hermeneutic context of historical tradition, as a tool of theology, into its role as a discrete, singular discipline.

25 Edgington, a leading British philosopher in the field, also takes this pedagogic and heuristic view in relation to the teaching of philosophy itself (Thornbury 1997a).

26 'Unless children can imaginatively envisage how things might be, and how they themselves might be, it will be difficult for them to set goals towards which they can grow' (Lipman, Sharp, and Oscanyan 1980: 65). 'It is an unfortunate part of traditional education that training in logical rigour is often assumed to take place only at the expense of imagination and creativity. The approach taken in this program supposes on the other hand that logical thinking can be encouraged by means of creative activity and, conversely, that creativity can be fostered with the development of logical ability. The two go hand in hand'(Lipman, Sharp, and Oscanyan 1980: 64).

[27] For instance, in relation to art and the aesthetic through the philosophical notion of an 'art-world' (Cooper 1992, Wollheim 1980b); or in exploring geographical possibilism's conception of the *genre de vie* (Johnston et al 1994: 216); or reference group theory (Runciman 1966); or transworld depravity in religious education; or even the notion of the *philosophical underworld* (see Honderich 1995: 678 and chapter 4).

[28] The research case for re-visiting notions of creativity has been made by Bailin (1994) and Fryer and Collings (1991). The 'divergent' versus 'convergent' thinker account of Torrance (1993) has been largely discarded. For a coherently worked-out claim concerning creativity in post-formal thinking see Kincheloe and Steinberg (1993).

[29] *Stochastic*, as used by Pauling and by Fogel, has the meaning of 'conjectural', while Ferguson sees its locus as more in contingency and 'chaos theory'. Conjectural thinking in mathematics is a formal technique involving exploratory thinking within a deductive system. See also chapter 4.

[30] For example, see Groake et al (1997), Halpern (1995a, 1995b, 1997) and Hughes (1996).

[31] 'Under suitable circumstances, a room full of children will pounce on an idea in the way a litter of kittens will pounce on a ball of yarn thrown in their direction. The children will kick the idea around until it has been developed, elaborated upon, and even in some instances applied to life situations, although the latter is seldom achieved without the teacher's artful guidance' (Lipman, Sharp, and Oscanyan (1980: 104).

[32] 'The child senses that the language and concepts adults employ in presenting a view of the world or in presenting a directive for how the child should act in that world - that language and concepts form an intimate part of the adult world view' (Lipman, Sharp, and Oscanyan 1980: 80).

[33] See Habermas (1978) in *Knowledge and Human Interests* for a general account.

[34] Griffiths (1979) gives a full analysis. It was thought that students would discharge their social responsibilities more effectively, autonomy being linked with social conscience - as the *Manual of Instruction* issued in 1925 and current for over fifty years revealed. The approach to the philosophy component of the International Baccalaureate was close to the French model. Stress was placed on critical reflection, and upon the importance of themes, problems and ideas rather than the doxographical study of authors and texts in the selection of a canon. See also Druet's (1987) *The Evolution of Philosophical Ideas in France.*

[35] Reflection is prominently involved as Radford (1996: 311-12) in his case for the 'examined life' makes clear. Work in English studies and on teacher reflectiveness would tend to support such claims (see chapter 8). Support for this claim can be derived also from MacIntyre (1981, 1988) in general philosophy; from Berrill (1990) and Fox (1990) in education - who identify links between narrative and argument; from Hawthorn (1991) in the content area of history; and among those see stories as the key access device for understanding ideas through feelings or cognitive emotions. This matter is discussed more fully in chapter 7.

[36] Her case is that the physical aspects of education were devalued by the Enlightenment commitment to universal, context independent knowledge, 'a very different perspective from humanism which did not forget the body' and the notion of the 'knowing subject'. Many feminists have pointed to the implicit association of masculinity with the rational, mental side of this dualism and femininity, with the bodily domain (21).

[37] See Assiter (1994: 17-26). The detail of her argument runs as follows. According to Plato in the *Gorgias*, it is a precondition for engaging in rational enquiry that one

should already possess and recognise certain moral virtues. A prior commitment to those values is required if enquiry is to proceed. Enquiry into the nature of what is good is conceived by Aristotle as analogous with the process of becoming a master craftsman. The knower is transformed in the process of gaining knowledge in the way that a craft worker is changed as he gains understanding and skill in the practice of his craft. Aristotle saw coming to terms with the discipline of philosophy, one of the least 'vocational' of subjects, on the model of a craft. He argued that the apprentice not only needs the knowledge requisite for the exercise of a particular skill, but additionally he or she must acquire knowledge informed by 'reason', that is knowledge informed by critical reflection on alternative approaches to the exercise of the skill. This constitutes the end-point for that particular agent in his/her particular circumstances. 'Guilds, on this perspective, are located in a context, one which contains the history of the craft. Furthermore, rationality and knowledge, on this model, are historically and contextually situated. Knowing subjects are fully-rounded persons, with bodies, and members of guilds' (Assiter 1994: 22).

38 As I do also in chapter 8. See Coia (1992) in *Conceptualising the Person in Personal and Social Education.* Unpublished Ph.D. thesis. University of London.

39 Some of these are similar to the *imaginary companion*, a common phenomenon of childhood in which non-existent playmates (children and sometimes animals) have, for the child, a very real existence. Although compatible with good mental health, they sometimes persist into adult life (McKellar 1979: 176).

40 'The knowledge and understanding to be gained in a liberal education must be as fundamental as possible in order to have the generality of application that is more rather than less liberating. The term 'fundamental' is used here in the sense of necessary foundation, and stands opposed to certain particular items of knowledge that might be useful in themselves but upon which nothing or not much can be built.' (Bailey cited in Bridges 1994: 10).

41 Fisher (1990: 123-128) reported that a Universities Working Party had no empirical evidence available to defend the position of the subject to government. Fisher concluded: 'What is really needed is research into the transferability of philosophy.'

42 'There is a certain irony in the contemporary pre-occupation with generic skills such as those of critical thinking, values clarification, interpersonal relations and creativity. Not so long ago it was firmly believed that a classical education in some generic way made a better man of one ...By studying the Classics, individuals would be fitted to take posts of responsibility in the Civil Service, in Industry, in Education, and in Government throughout the British Empire, or so it was held' (Barrow 1981: 7).

43 See these writers for examples of a typical approach to the teaching of informal logic; and Fisher (1989a, 1989b) or Groake et al (1997) for an adaptation of this approach to UK needs. See also Weinstein's (1988) discussion of the relationship between reason and critical thinking.

44 The claim for the journeyman, second-order role of philosophy was evident here but, unusually, the Netherlands 'argumentation' school also emphasises the applied contribution they can make to the clarification of feelings, for instance in cases of marriage guidance (Van Eemeren et al 1984).

45 This can occur in more than one 'voice' or culture, as in the case of the bilingual or deracinee writer, e.g. Conrad, R.S. Thomas, or Julien Green. The example of Pessoa (1974, 1992) shows that a multiple voice and identity can be authentic, as Pontiero (1992) argues in his introduction to *The Year of the Death of Ricardo Reis.*

46 I allude to the linguist Saussure's (1988) distinction between language in theory (langue) and practice (parole).

47 Barrow (1987) puts the point in this way: 'As a matter of logic one has to think critically about something (or display one's creative talent in some specific context or contexts) and since what constitutes sound critical thought or creative expression in one area such as history differs from what constitutes it in another (say physics) it follows that a necessary condition of being critical or creative is understanding of particular domains' (186-199). Bridges (1994: 11) cites Hirst (1975) and McPeck (1987) in support of this position.

48 See McPeck (1990: 34). It has to be supported by a theory of domains of knowledge; but where do we draw the boundaries between such domains? Hirst (1965, 1993) offers such a theory of domains or 'forms of knowledge', lately amended. Bridges (1989: 11) claims that the idea of separate forms of knowledge 'has been eroded in so many different ways that it is difficult to regard it as a defensible representation of water-tight compartments.' He argues that the logical coherence and integrity of history as a subject can be attacked by showing that there has been repeated drawing and re-drawing of its boundaries - as in the case of archaeology and history, or history and science. A similar view is advanced by Barrow (1987: 187-199).

49 These are as it were the meta-skills, the second order skills which enable one to select, adapt, adjust and apply one's other skills to different situations, across different social contexts and perhaps similarly across different cognitive domains (Bridges 1994: 9).

50 Green concludes: 'Near transfer has been demonstrated frequently; far transfer has proved more elusive' (Green in Bridges 1994: 42). Andre's (1989: 61) definition of problem-solving is followed here. 'A problem is a situation in which the individual wants to do something but does not know the course of action needed to get what he or she wants. Problem-solving consists of the mental and behaviour activities that are involved in dealing with problems.' See also De Corte (1990) and Covington (1987).

51 Schecht goes on: 'The degree of subject dependency in assessing the sufficiency of premises is least in deductive arguments, greatest in conductive arguments. Critical thinking courses, then, can assist students in developing basic reasoning skills, although such courses cannot provide an understanding of all of the information, methodologies, or perspectives which may also be necessary for the assessment of arguments in various subject areas. However valuable it may be, what can be taught and learnt in a critical thinking course is not in itself sufficient to enable students to make rational judgements in many specific contexts' (138).

52 Donald (1992: 413-30). This study was of particular interest in two respects. Donald set out to establish that a field of study could meet some general set criteria for a discipline. The criteria used in this higher education study included: 'a general body of knowledge with a reasonably logical taxonomy, a specialised vocabulary, an accepted body of theory, a systematic research strategy and techniques for replication and validation.' (See Appendix 29 & Donald 1992).

53 There was interest in a number of countries in applying the problem-solving approach: see Nickerson (1985a: 64-109), Fisher (1989a, 1989b); and Voutilainen (1991). In the primary school a variety of approaches compiled by Fisher included the use of computers, decision-making and games approaches. Examples of material developed for the primary class-room include Bicknell's (1987) *Think Books*, Cam's (1994) *Thinking Stories*, Lake's (1996) *Zeto and the Gorgon Warriors* and Sprod's (1993) *Books into Ideas*. Jackson (1983, 1987) and Dowson (1987) have approaches to problem-solving based on the idea that: 'all problems have the two outstanding features of an objective that someone is trying to reach and an obstacle that is preventing them from reaching it. The key to the solution of any problem can be found in a clear definition of the problem in terms of the object and the obstacle'

(Jackson in Fisher 1987: 20). Straker in Fisher (1987: 105 -124)) advocates both the posing and the solving of problems using micro-computer simulations in which logistical variables have to be manipulated. There was also a growth of interest in problem-solving and thinking in particular subject areas, for instance in science teaching.

54 Concerning the balance of professional opinion, they observe: 'The evidence seemed to balance somewhat heavier on the side of domain-specific learning as the practicable route to improved education. The results of the CASE project have thrown some weight on the other side' (Adey 1994: 124). However, CASE applies to early adolescents. Shayer (*personal communication*) comments that no one has made intervention work for adults, young or old.

55 'At the end of the two year intervention period, there are some real gains in the levels of cognitive development of experimental students but no measurable improvement in their science achievement. One year later, the gains in cognitive development have almost disappeared, but most of the experimental groups show a significantly higher proportion of students achieving high results in science compared with controls' (Adey in Maclure 1991: 87). A second curriculum project applying the CASE approach to mathematics teaching was begun by Shayer and colleagues in 1995 *(personal communication).*

56 Matthews (1994: 93) claims that philosophical discussion of death among children sharing the experience of death in a leukemia ward showed that their stage of understanding was at considerable variance with the Piagetian model. Reading *Charlotte's Web* (White 1980) helped them to 'model a good death'.

57 Evaluation of the De Bono scheme, in the Australian setting, claimed 'impressive results' with 'significant shifts in scholastic aptitude and originality in keeping with earlier results...originality is most improved, followed by flexibility and then fluency' (Edwards 1991: 28-9). Shayer (1991) however takes the view that this approach is only suited to the more able secondary school pupil

58 As I argue in chapter 7, in relation to work by Bailin (1994), Fryer and Collings (1991) and others, this 'heroic' view of creativity is now discredited among the academic and research community, and teachers.

59 Despite the title of *The Logic of Scientific Discovery* Popper had virtually nothing to say about the genesis of new theories - only about how to evaluate them. De Bono claims an interest in the genesis of new or 'divergent' thought but appears to be unaware of the work by philosophers on counter-factual theory and modal realism, or their expression, for example, in science fiction (Clark 1995). His philosophical position has never been fully argued through. See chapter 4 for further discussion.

60 There were grounds for 'mild optimism' about the positive attitudinal and behavioural change in the pupils and clear evidence of positive benefits for the teachers. See also Blagg (1991). Evaluation studies of Feuerstein's Instrumental Enrichment, were reviewed by Nickerson and reported in Maclure (1991). These studies showed generally beneficial effects, although reservations were expressed that some of the measures used resembled the training materials. An extensive study by the Schools Council (Craft and Weller 1983) was cut short, but its early findings were that 'the evidence was mixed but largely positive'.

61 See Craft and Weller (1983), Feuerstein (1979, 1980) and Nickerson et al (1985). The Feuerstein approach concentrated on improving cognitive performance of the low-achieving adolescent through a three year series of problem solving tasks grouped in 14 areas of specific cognitive development. A terminology of 'instruments' rather than lessons, was favoured 'because in and of themselves they are virtually free of specific subject matter.' Link and Edwards (1991: 32-39) concluded: 'The evidence was mixed but was largely positive, in some cases extremely so. Evaluator's

observations have frequently shown that pupils enjoy lessons: they are interested, motivated and gain in self-confidence. Pupils were felt to be learning in most lessons observed. One evaluator reported on the apparent ability of even seriously handicapped pupils to keep up with the group. In some cases the teachers reported improvements in attendance and behaviour, and noted increases in pupils' spans of concentration. In others, greater concern for accuracy and planning was observed, and pupils were described as less impulsive and as being concerned with checking their work more carefully' (45). For an account of the development of the Feuerstein programmes see Nickerson et al (1985: 147-187).

62 See Lipman et al (1980).

63 See Kornhaber and Gardner (in Maclure 1991: 161) who give the example of Robert Bakker (1986) who used logical-mathematical intelligence to interpret dinosaur strides, and spatial intelligence to visualise the structure of dinosaur anatomy. He then hypothesised from their metabolic rates that these creatures were warm-blooded. (The Bakker thesis was subsequently been challenged, and finally confirmed by other scientists in 1998).

64 'Experience tells us that there are conditions which relate to a specific field of knowledge and others which enable generalisations covering several fields. The teacher can explain, for example, a fairly large number of possible relations between conceptual categories, and lead the student to find others spontaneously. This transformation of representations is a way of helping meta-knowledge to develop' (Bresson 1991: 175).

65 'The whole matter of thinking skills - their nature, their interrelationships, their teachability, their transferability and so on will no doubt continue to be controversial for a long time to come' (MENO 1994:1). Underlying the MENO project is the idea that problem-solving skills could be transferably taught. 'We need to say, for example: now here's a problem in Chemistry, or Economics or Business: what kind of insight would you use? and thereby refer students back to the Problem Solving skills with which they should be familiar. Similarly, with Critical Thinking we need to ask: is this a rational position to take, bearing in mind the way in which you had to justify your positions when 'thinking critically'?' (UCLES 1994: 12). The approach has been applied to undergraduate assessment and to the development of AS level draft papers by Fisher (1989a, 1989b, 1997; and personal communication). See also Hernstein et al (1986).

66 A term coined by Newmann (1990). It is also worth noting that many claims for teaching philosophy which are based on naturalness and intrinsic worth are in effect dispositional or values claims.

67 See Facione and Facione (1990, 1992, 1994), chapter 5 and Appendices 18 & 19. Ennis (1991) also combines the three strands of critical thinking, creative thinking, and reasoning in his model.

68 Fears that teaching students philosophy or thinking in some depth would lead to depression or mental illness was mentioned to Ward (1983: 14) by some early critics. This objection, although apparently trivial, raises a fundamental question about the relationship between thought and feeling. Chapter 8 addresses this question in relation to Plato's objections to teaching philosophy to the young, and the depression of late adolescence suffered by Mill. The medical and psychiatric evidence suggests that depression induced by philosophising, other than through the stress of one's academic studies, does not feature in current clinical models of aetiology or epidemiology. Academic impairment becomes likely only at 'moderate to severe levels of depression' (Heiligenstein et al 1996). Beeferman and Orvaschel (1994) however suggest that group psycho-therapists should begin to target more the

'cognitive aspects' of adolescent depression. For state-of-the-art reviews of the psychiatric literature and research see Oliver et al (1995) and Birmaher et al (1996).

69 Logomachy in newspaper coverage and articles featuring prominent philosophers who clashed about the introduction of A level philosophy into schools in the UK illustrated this point during 1986. A libel suit resulted in which Roger Scruton, professor of philosophy at Birkbeck College, University of London, was the chief protagonist (Guardian 1985). For discussion of the Gramscian question see Entwistle (1979), Gibson (1984, 1986) and Wolff (1981). The evolution and vicissitudes of the subject in Italy underlined the political strength of the subject as perceived by decision-makers. In Italy philosophy remained a pre-university course taught by specialist teachers. Following the original French influence, however, considerable changes occurred after the School Reform of 1923 under Giovanni Gentile, Minister of Education. In an effort to ensure that students would begin to appreciate philosophical thought for themselves, Gentile replaced textbooks written by teachers by the study of original classics of philosophical thought. A strong connection between the history of philosophy and philosophy was asserted and strengthened by making the same teacher responsible for both subjects. (This was an early attempt to solve the question that often is asked: if philosophy is not to be taught by a separate teacher or department, within whose jurisdiction does it fall?). The notion of a philosophical *canon* was therefore strongly evident in Italy's approach.

70 The *Institute for the Advancement of Philosophy for Children* materials are much used in U.S. programmes of extension or enrichment for the gifted, despite the protestations of Lipman and colleagues and their intentions concerning the democratic 'community of enquiry'.

71 Griffiths (1979) shows how in Italy the notion of a compulsory requirement for the élite to have some understanding of philosophy emerged, together with the expectation that transfer would arise from training the mind. The main emphasis was upon the acquisition of a philosophical perspective in such topics as the philosophy of science, theory of knowledge and mathematical logic, ethics, and the philosophy of religion being introduced towards the end of the second year. The rise of fascism in Italy after 1936 brought other changes. Pupils were compelled to study Mussolini's Doctrine of Fascism, and political economy and public law were added to the syllabus, when it was intended that philosophy teaching should vindicate the political philosophy of the state. When a totalitarian régîme decides to use philosophy teaching to vindicate and support it, the assumption behind such an approach must be that philosophy can be used in a way that is ideological and indoctrinatory. The case of Spain presents another example of philosophy teaching as a device for setting an ideological, moral and political educational climate in the state as well as classrooms. A syllabus was issued by the Ministry of Education under Franco. Textbooks had to be approved by central government. However, teachers had discretion to choose within the list. These were modified considerably after the political reforms of the early 1980's. The aims of teaching philosophy in the Institute, or upper secondary school emphasis cross-curricular integration, and the links between philosophy and other knowledge that the student was acquiring (White 1988). I am grateful to John White for giving me a personal account of some of these developments.

72 Lipman and Sharp (1978a: 88). In all of this the role of the teacher is crucial. The pursuit of a democratic or communitarian classroom style of discussion, Lipman and Sharp argue, does not entail an equalising of the status of the teacher and students.

73 The rise of the *International Network of Philosophers of Education* (INPE) can be seen as reflecting the celebration by states formerly under totalitarian regimes of their newly acquired philosophical emancipation (Weinstein 1990). This development had some characteristics of a social movement as discussed in chapter 1, not least in the

emphasis placed on 'market' as opposed to political freedom, by some of the Eastern European philosophers of education.

74 'Higher order thinking is necessary for people a. to participate as responsible empowered citizens in a democracy b. to contribute as productive workers in a technological society; and c. to have rewarding personal lives which include managing one's private affairs, continuing to learn and benefiting from culture' (Newmann 1990: 41-56).

75 Siegel (1993) retorted that far from being an exclusively post-modernist enterprise, such a project would require traditional epistemology, moral theory and 'meta-narratives'.

76 Haynes (1991: 121-137). See Baker (1976) for a history of ideas account of this context.

77 Those influenced by Dewey (1910), Gramsci (1971), critical theorists, Marxists, sociologists of knowledge, hermeneuticists and 'radical' philosophers would want to argue that teaching philosophy can lead to increased personal and collective hegemony (Giroux 1988: 196-203). The 'critical hermeneuticist' Gallagher (1992) draws attention to the hidden curriculum which philosophy can help to identify and de-mystify.

78 How this meets the criteria for a 'social movement' was discussed in chapter 1.

79 See also Joyce (1996). *The European Philosophical Enquiry Centre* (EPIC) set out to use philosophy for community empowerment, being funded by the Scottish Office from its Crime Prevention Budget. McCall, the Project Leader, claims that EPIC *Philosophical Inquiry* activities persuade violent, alienated teenagers to begin to argue out their conflicts (Joyce 1995: 4). Van Eemeren and Grootendorst (1984) make similar claims for argumentation theory as giving benefits within marriage guidance and conflict counselling.

80 See Wringe (1981) and Archard (1993) for discussions of rights, and Patricia White (1989a, 1989b) for a treatment of personal and social education. In respect of stage theory, I have in mind here particularly the work of Kohlberg (1981) and Piaget (1926).

81 Assiter (1994: 17-26) believes that the approach to National Vocational Qualifications fell into the 'pitfall of verificationism'.

82 Bryan and Assiter's (1995: 37) claim is that: 'In the 17th and 18th Centuries the physical aspects of education were devalued further alongside the Enlightenment commitment to universal, context-independent knowledge and reason.' This matter is examined again in chapter 4.

83 His view is compatible with Wiener's (1985) critique of *English Culture and the Decline of the Industrial Spirit.*

84 'A socialist view of transferable thinking in education will develop multiple facets of individual human potential, and will encourage an active citizenship able to challenge existing social relationships - as well as providing students with the skills, knowledge and values that enable them to be economically productive' (Gubbay 1994: 50-51).

85 Critical thinking in Facione and Facione's (1992, 1994) criterial formulation - or Lipman's pedagogic style - can be seen to be implicitly tilting at rigidly-held dogmatisms, e.g. creationist teaching in US. (See Appendices 18 & 19; and Facione and Facione 1992, 1994). Morrison and Ridley's schema is critical by implication of vocationally 'instrumental' education (see Appendix 2).

86 These would include the emerging economies of S.E. Asia, for example, as well as the fledgling democracies of the former Soviet bloc.

87 The work of Adey (1991, 1994), De Bono (1970), Feuerstein (1979, 1980) and others offering intervention programmes of transferable thinking, is assessed in more detail in chapter 3.

88 This has been associated with the need for philosophy when under threat, in the universities and elsewhere, to find a new role. This is particularly evident in the US, where the rise of informal logic and critical thinking has sometimes displaced high school philosophy. Some UK universities, during a period of financial cuts, retained philosophy departments to perform a service function in teaching higher order thinking and academic literacy instead of closing them. Some valuable work has resulted from this otherwise regrettable development (Fisher 1989a, 1989b, University of Cambridge Examinations Syndicate 1994a, 1994b).

89 Weinstein (1993) claims: 'Just as McPeck can be seen as reflecting the conservatism of English upper-class education Paul can be seen as reflecting the optimistic liberalism of progressive education: the belief in a unitary political and social discourse without which democracy loses its core'(17).

90 'One discipline, however, is significant through virtue of its absence - philosophy. Apart from O and A level logic, which includes a little philosophy of science, it is still impossible to follow a formal, examinable course in philosophy in schools. Given the recent rapid growth in the curriculum it is odd that philosophy should have been left out in the cold and it is natural to assume the omission will be rectified' (Ward 1983: 252).

91 Wringe (1981: 135): 'A welfare right...is the right to receive help or goods from others in circumstances of extreme need, when one is unable to obtain these things by ones own efforts...All that is required is that an individual should have present or future interests capable of harm through neglect or deprivation.'

92 Others would object to any rights or entitlement claim at all. For instance, it might be argued that responsibility for educating the young philosophically, and especially dispositionally, is a family, generational or religious responsibility and not one for the larger society.

93 'The whole curriculum in English schools, as defined by the National Curriculum Council, which comprises the subjects of the statutory curriculum, the five named cross-curricular themes, cross-curricular skills and cross-curricular dimensions, can be seen as an entitlement curriculum' (Craft 1991: 183).

CHAPTER 3

The transcendental claim: the pervasiveness of philosophical matters.

1. The transcendental claim

The transcendental claim for teaching philosophy to children was introduced in chapter 2 as the claim of ubiquitous 'embeddedness': that philosophy lies behind all things, that philosophical assumptions and questions pervade our lives, and particularly the pedagogy, curriculum and organisation of schools and colleges. Because of its comprehensiveness, the claim can be argued to support a corollary that philosophical thinking must have primacy, unifying and overall importance in any proposed educational arrangements. If important truths lie behind the surface of 'the presenting symptoms' of the world, and especially if many of these truths are 'counter-intuitive', then teaching will be needed to help students penetrate through to certain truths, understandings and further possibilities (see chapters 4 and 7).

The transcendental claim can be substantiated by showing that our present educational arrangements reflect a pervasive presence of arguments, rhetoric, assumptions, issues and content of a philosophical nature involving higher order thought. Following a demonstration of such pervasive philosophical concerns in curriculum, pedagogic and education management, it will be argued that a *philosophy and pre-philosophical curriculum* can be best built on the twin foundation of the transcendental coupled with the possibilist claim (see chapter 4).

2. Kant and the transcendental

Although the transcendental argument has been employed at least since Aristotle, it is chiefly associated with Kant whose use of it was intended to establish that possession and application of certain concepts is indispensable to empirical experience. Kant distinguished objects and events as they appear in our experience from objects and events as they are in themselves, independent of the forms imposed on them by our cognitive faculties. The former he called phenomena; the latter noumena or things-in-themselves. Phenomenology in the 19th century was defined as a science through which we come to know mind as it-is-in-itself through the study of the ways in which it appears to us. For Kant, writing in the *Critique of Pure Reason* in 1781, phenomena are all we can ever know.

> If, by the term noumenon, we understand a thing so far as it is *not an object of our sensuous intuition* this is a noumenon in the *negative* sense of the word. But if we understand by it an *object of a non-sensuous intuition*, we in this case assume a peculiar mode of intuition, an intellectual intuition, to wit, which does not, however, belong to us, of the very possibility of which we have no notion - and this is a noumenon in the *positive* sense. (Critique of Pure Reason, trans. N.K. Smith 1929: 176-78)

The transcendental argument may therefore be taken as one which shows what must be the case if a certain thought or experience is to be possible. In the case of transcendental realism what lies behind appearances is held to be ultimately real; in the Kantian version it is ideal, hence transcendental idealism. [1]

One philosophical difficulty in relation to Kant's concept of the noumenal has a direct effect on theoretical pedagogy and thus the approach to practical classroom teaching. Kant postulated the existence of a final version of reality, the noumenal, which remained behind all presenting appearances as an ideal which could not be directly apprehended. Hegel on the other hand, in *Phenomenology of the Spirit*, took the view that noumena are knowable (Acton 1967: 442-443). He traced the mind, or spirit, through various stages in which it apprehends itself as phenomenon, to the point of full development where it is aware of itself as it is in itself - as noumenon. A transcendental or a possible worlds approach to the teaching of philosophy and thinking, or teaching generally, raises this question in relation to the noumenal: is there to be assumed a final solution to the problems in physics, or maths which children study? Is philosophical, or scientific education for that matter, like the musical game of passing the parcel, when all the wrapping paper will be progressively taken off the intransitive realm and we shall finally see the world as it really is?

3. Bhaskar and the transitive realm

With the Kantian schema and the noumenal problem in mind, Bhaskar (1978, 1986) argues that natural science involves a fundamental distinction between two sorts of event. There are those events that belong to a transitive realm - the actual worlds of relations between objects and phenomena, accessible to an observer through sense and perception. Other events belong to the intransitive realm which is equally real but accessible only through theoretical construction and experimental manipulation. Our perception of this realm is refracted, as the evidence of bias in counter-factual thinking and inference described in chapter 4 will show.

In Bhaskar's (1986) account the transitive realm, the world of relations accessible to an observer directly, is constituted by 'a hierarchy of law-like, necessary and generative mechanisms.' This hierarchy of generating mechanisms includes in the biological realm, the DNA code; in the chemical realm, the table elements and their conjunctures and permutations; and in the physical realm, the structures of atomic and sub-atomic matter and energy fields. That science operates in this way and not by empiricist principles, according to which scientists merely seek for an order among observables, is testified by the existence of the experimental method, which

presupposes that no order among observables is immediately apparent. It is only when such observables are deliberately removed from their normal contexts and conjunctures that, according to Bhaskar, the hidden order of the intransitive real becomes apparent. [2] The transcendental realist position provides a general set of philosophical assumptions and explanations by which science teachers may proceed. It also provides a justification for education and teaching, since it is unlikely that an individual can sit down, and through pure introspection, gain eventual access to the entire intransitive realm. Such leisured reflection may at times be part of the investigative repertoire of the scientist, but it is wasteful of time for others. Therefore one of the main purposes of education will be the opening up and communicating of the intransitive realm to students, particularly in respect of counter-intuitive truths. [3] For Bhaskar the intransitive realm is both extensive and constantly growing, as scientific and other thought progresses.

> As distinct from a Kantian approach, it is not my view that in elucidating the fundamental categories of our understanding we reach an unchanging structure that is a priori in all rational thought in all times and places. That there exist any elements of thought that can be known to be immune to changes making transcendental demands upon us I do not accept. (Bhaskar 1986: 92)

However, the position taken up over the issue of the noumenal will still be critical when translated into educational praxis. It is possible to see Bhaskar's position as an example of finite stage theory, with some ultimate resting point of final truth about the particular aspects of the intransitive world (Kohlberg 1981, Piaget 1926). Or one can argue that it involves seeing education in terms of an indefinite, unending series of small steps forward punctuated by occasional paradigm shifts of stage theory.

Bhaskar's attempt to solve a particular problem in the logic of scientific discovery by a new and overarching theory offers a considerable improvement for educationists on the falsificationist views of Popper (1959). Popper's account of falsification has sometimes been criticised as not corresponding to how the scientific or intellectual community actually proceeds, that is, according to Kuhnian (1970) paradigms or notions of 'mentalities' (Vovelle 1990). Popper was, for example, unable adequately to account for why falsification is not necessarily accepted; or how, within the terms of Popperian theory, the particular point in time at which a new paradigm supervenes is differentiated from other instances of falsification. [4] Bhaskar appears not to be

Kantian in the strict sense, in that he offers no place for the noumenal as ideal.[5] If Kant considered the real world as ultimately unknowable except through, as it were, a number of proxy statements, Bhaskar on the other hand appears to hold the Hegelian view that these descriptive approximations can describe a permanently replaceable, scientific reality. Scientific understanding will continue to progress.

4. The case for teaching

For Bhaskar the counter-intuitive findings of science are just one example of why the appearance of things cannot be taken for granted. However, importantly for this study, this does not apply just to science; it will apply just as much to any other subject discourse where philosophical thoughts explicitly or implicitly pervade or lie behind the surface of the subject. In Bhaskar's account the intransitive realm is not immediately apprehensible; it is frequently counter-intuitive, contradicting the assumptions of common sense or prima facie observation. What the existence of a separate realm of knowledge, the intransitive which is not immediately accessible, brings home is our need for help in gaining access to it. Help is needed in uncovering the intransitive realm: teaching will be required. There is thus an important *pedagogic dynamic* in Bhaskar's transcendentalism.

> On the transcendental realist view of science, then, its essence lies in the *movement* at any one level from knowledge of manifest phenomena to knowledge, produced by means of antecedent knowledge, of the structures which generate them. As deeper levels of reality are successfully identified, described and explained, knowledge at more superficial levels is typically, revised, corrected or more or less drastically recast, issuing in a character pattern of description, explanation and redescription for the phenomena understood at any one level of reality. (Bhaskar 1986: 63)

A persuasive feature of such an account is that it fits in remarkably well with child development theory within the general framework of educational theory. It is remarkably similar to the Vygotskian (1962, 1991) claim that children need teaching in order to pass through a 'zone of proximal development', in which the next step in learning can only be achieved with assistance. However, Bhaskar gives a very limited place to apprehension of the ineffable as part of that process.

> Transcendental realism is also and equally opposed to any non-immanent or transcendent realism, which posits a sphere of pure uncognisable other-being, defined in terms of its *inaccessibility* to human beings (as are Kantian noumena). A realm of 'ineffabilia', e.g. held in contrast or conjunctions with the sensibilia or intelligibilia of empirical or conceptual realism, is certainly conceivable, but it is something *about* and *for* which nothing (or at any rate very little) can be said. (Bhaskar 1986: 8)

Bhaskar's position of 'critical naturalism' in the human sciences has developed into a movement in both philosophy and the human sciences known as *critical realism* (Collier 1998: 720-22). Critical realism offers a vigorous notion of 'emancipatory social practice' of relevance in education (Corson 1990b: 223). [6]

The worthwhileness of making a strong philosophical case for teaching the pre-philosophical in schools becomes evident when we look at the work of Bhaskar; for the merits of his analysis are pedagogic as well as philosophical. We are provided with a philosophical account of why teaching is needed, and with the basis of a pedagogy which will encourage us to pursue the counter-intuitive, the counter-factual and the creative in our scientific and other thinking.

The case for teaching can thus be specifically advanced from the transcendental perspective. It would begin by arguing that most people would surely wish, and indeed need to have assistance in proceeding to a greater understanding of the world as it is, transcendentally. Given the evident difficulty of this endeavour, which attempted on an unaided basis would become an awesome task, there comes a need for some form of educational provision and teaching. [7] We are also impelled by Bhaskar's account towards a pedagogy of transcendental realism which translates into a style of teaching and classroom practice exhibiting an unremitting drive towards exploring further layers of reality. This will require a full repertoire of active and interventionist approaches on the part of the teacher. These may in turn come to be seen as a canon (see chapter 6). [8]

The pursuit of Bhaskarian transcendence may also be viewed more personally, in the sense proposed by Sartre (1958) in his account of facticity and 'authenticity'. By facticity, Sartre means that certain things can be said to pertain to us in a factual way.

Our consciousness is never perfectly identified with our facticities; we are more than our body, our past or our environment (Catalano 1985). By the mere fact that we can contemplate our facticities and examine them as 'objects', we know that we are not identified with them. We can interpret our relation to these 'facts' and in this sense, we transcend them. In particular, at any moment, we recognise that what we are actually doing in reacting to things is one of many possible modes of behaviour.

Thus our 'transcendencies are our possibilities' (Catalano 1985: 82-4) in two senses: in what we might be doing or what might be happening to us; and what we are actually doing, insofar as it is not necessary for us to have chosen this action. As the term is used here 'transcendencies' does not mean remote or far-fetched possibilities, but believable ways of behaviour in the Sartrean sense. [9] Human beings for both Bhaskar and Sartre, exist as a synthesis of facticity and transcendence.

However, the severely cerebral bias of Sartre's notion of total mental freedom can be seen as similar to the male, Enlightenment rationality attacked by critics of critical thinking. His account can be improved upon, in my view, by adopting Merleau-Ponty's emphasis on the 'body-self' and its dialectical ambiguity in negotiating with the world (Macann 1993, Damasio 1994); through a neo-Aristotelian, feminist or hermeneutic emphasis on practical knowledge and corporeality (Assiter 1994, Harraway 1991); and by emphasising the narrative nature of self-constitution (Schechtman 1996). There are particular implications here for the curriculum, and for the teacher as a person and a thinker (see chapter 8).

5. Empirical evidence for the transcendental claim

What is the empirical evidence for the transcendental claim? There are three main areas, or domains (and their sub-domains) from which the evidence for the pervasiveness of philosophical concerns can be gathered. When taken in combination they amount to a demand for considerable 'thoughtfulness' on the part of teachers as ironists, reflective practitioners and public intellectuals (see chapter 8). [10] Firstly, there are the philosophical messages of the school, and the broader society, as signalled through the *management* philosophy of the school, college or responsible educational body. Secondly, there is the philosophy informing the *pedagogic practice*

of the teachers, whether in teaching philosophy as a specialist subject or in teaching other subjects. Thirdly, there is an area of philosophical *subject content* in the various specialist subjects, when philosophical concepts are both explicitly or implicitly taught. In the case of the teaching of philosophy as an identified subject on the school or college timetable, the 'transcendental' in the form of philosophical ideas and issues will be highly visible as the central agenda. The presence of philosophy teaching will also imply a philosophy of philosophy teaching (and stances towards the pre-philosophical curriculum), consisting of a set of claims and a rationale for why the subject is being taught at all, and why in that particular form. [11]

Just as curriculum theorists offer meta-analysis which informs the practice of teachers, so does education management theory. Greenfield (1989), pressing for a subjectivist and phenomenological perspective 'that reality is socially defined', questions the assumptions of functionalism in scientific management, organisation and method studies. [12] The philosopher Hodgkinson (1991: 193), for example, argues that there is actually a philosophical method by which leadership can be pursued within management and organisations.

Management theory frequently uses philosophical language and concepts. Orthodox meta-explanation in the education management literature, for example, seeks to explain ambiguity, the rational-bureaucratic, the collegial or consensual, in phenomenological language. Hoyle, Weick, and Baldridge argue, for example, that 'conceptual pluralism', 'loose coupling' and 'competing rationalities' are endemic within educational organisations (in Bush 1989). [13] This is of some consequence for the kind of philosophy and pre-philosophical curriculum that can be offered to students. Management philosophy is, ventriloquially, the voice which determines the architecture and physical detail of a school in ways which, for instance, may facilitate or militate against the community of enquiry or democratic forms of life - in concourses, corridors, dining-rooms and playgrounds. Utopian, educational experiments in visionary school architecture, building utopian school communities in rural or urban settings, have a long history: and they are the expression of strong possibilist positions (Thornbury 1978, see chapter 4).

Philosophers of education have been influential in the culture of professional teacher education through a substantial permeation of philosophical ideas, categories and concepts. Some explicitly claim that philosophical opinions which inform and

pervade their professional concerns have practical consequences to do with how teachers, and therefore children, act in classrooms. O'Loughlin and Campbell (1988), for example, argue that critical pedagogy must begin with the pre-existing beliefs of the prospective teachers, what Strawson (1959) would call their 'descriptive metaphysics'. [14] McCann and Yaxley (1992) see this as one of the central tasks of the philosophy of education in relation to teacher training. [15]

A number of philosophers of education have proposed that a general epistemology underpins, or should underpin our curriculum arrangements. These include Phenix (1964), Hirst (1974), White (1973, 1982, 1990), White and White (1985), and Walsh (1993). Hirst (1974, 1983), for example, begins by distinguishing seven *forms of knowledge* each involving the use of concepts of a particular kind and a distinctive type for its objective claims, when his inclusion of *philosophical understanding* is of some interest. [16] His later position goes on to emphasise forms of practice and discourse rather than forms of knowledge (Hirst 1993, Barrow and White 1993, Walsh 1993: 139). [17] One can argue that Hirst's social practices can be discerned, for example, in the *institutional theory of art*, in which an understanding of art and the status of art objects are seen as institutionalised activities (Dickie 1984); in the context of the history of art (Danto 1981); in the historian's notion of *ideology* and *mentalities* (Vovelle 1990); or the psychologist's conceptions of *domain, frame, schema, scripts and worlds* (see chapter 4).

The pedagogic practice of teachers in the classroom reflects underlying epistemological and other philosophical assumptions through their theories of learning (Wood 1988, 1992). *Constructivism,* for instance, postulates various models of the world, in which it can be said of a problem that we are on the way towards its solution - but that no piece of scientific knowledge is firmly in place for all time (Driver 1988, Appendix 13). All we have at any given moment, in a phrase of Popper's, is 'provisional dogma'.

> There is an epistemological implication of this view of knowledge as constructed which has yet to be taken seriously by educators, and that is that to know something does not involve the correspondence between our conceptual schemes and what they represent 'out there'; we have no direct access to the 'real world'. Clough and Driver (1991: 263-292)

In geography teaching the approach to cognitive and mental mapping, predicated on *phenomenological* theory, has been widely influential in work schemes for children from the primary school onwards (Agnew et al 1996, Downs and Stea 1973, Gregory et al 1994, Gould and White 1974, Johnston et al 1994). The learning theory of *phenomenography* embodies a somewhat similar approach, in its emphasis on classifying possible ways in which a child might conceptualise a physical occurrence in the external world, such as what happens in terms of the physics of motion when a bicycle is ridden (Marton 1981). Prosser (1993: 21) sees phenomenography as a theory of learning which emerges from a research methodology, 'which aims to identify peoples' qualitatively different experiences and understanding of the world, and systematically describe them in terms of categories of description.' [18]

The importance for educational philosophers of the philosophical questions and assumptions found in school organisation, pedagogy or subject teaching is also empirical. Such assumptions influence those who prepare teachers, and those who make political decisions concerning educational policy; and they remain in the minds of teachers who are indirectly influenced by them, having forgotten the origins of their own thinking. Following the transcendental account, if there are important theories and systematic explanations that lie behind school curriculum, organisation or pedagogy, we would wish teachers to be aware of them. The general principle, of attempting to penetrate what lies behind the general appearances of the world, is relevant not only to all those who are taught, but also to those who teach.

6. The presence and prominence of ideology: the ideological objection

Much curriculum theory can be discussed in terms of its underlying philosophical assumptions in terms of ideology, as Lawton (1973, 1983, 1989) successively and others show. Skilbeck (1976), for instance, identifies four main ideologies as informing curriculum provision: those of classical humanism, progressivism, reconstructionism and instrumentalism, each representing a particular philosophical approach to the structure and content of the curriculum. [19] Lawton (1983) offers a general curriculum theory derived from cultural anthropology which sees the curriculum as an empirically founded, categoric system of thought informed by certain

cultural sub-systems. [20] Walsh (1993: 53) formulates an educational theory involving a typology of four forms of discourse; the utopian, the deliberative, the evaluative and the scientific. The first of these is particularly relevant to the study of 'possible worlds' of ethical counter-factual thinking (see chapter 5).

Hodson (1988) advocates a Kuhnian approach to curriculum development which views teachers as constructors and de-constructors of their own 'curriculum knowledge.' Corson (1988, 1990a. 1990b) draws on the ideas of Popper and Bhaskar to argue that philosophy can provide and generate valuable paradigms for how we should look at the development of our curriculum. Morrison and Ridley (1989) offer a taxonomy which illustrates the complex, ideological context of much curriculum planning (Appendix 2). Pope (1993) and Donald (1992) show how ideological assumptions are extensively present when teachers, and university teachers think about curriculum and pedagogy (Appendices 23 & 29). Constructivism has been a major ideological perspective, for science teachers in its 'strong form' and for many other teachers who practice its 'convenient' or weak form (Watts and Bentley 1991). Driver (1998) sets out stipulative criteria for applying constructivist method in teaching (Appendix 13). [21]

Some writers propose ideological agendas in the teaching of philosophy or critical thinking (see again chapter 2). Philosophy teaching would be seen as ideological, for example, by 'radical philosophers'; by phenomenologists concerned with the intentional activities of consciousness; by critical theorists addressing the historical strategies of domination and liberation; and by structuralist theorists and semioticians examining the unconscious codes of languages. A number of thinkers give a prominent place to one's ideological stance in teaching thinking for democratic, hegemonic, economic, vocational or emancipatory purposes (Assiter 1994, Facione and Facione 1994, Haynes 1991, Newmann 1990, Paul 1982, Weinstein 1990). Each makes some transcendental claim of philosophical pervasiveness, of explanations which lie behind events, which are also ideological and to do with power relations in society. For example, as discussed in chapter 2, Haynes (1991) and Weinstein (1993a, 1993b) take critical thinkers in the Anglo-Saxon philosophical tradition to task for promulgating a 'hidden curriculum' which is patriarchal, Eurocentric and hegemonic.

Those advocating the Marxist form of ideology, which seeks to replace 'fictions or distortions of objective reality', argue that reform in schooling will either precede, or come in the train of economic revolution. Gramsci (1971), Habermas (1970, 1981), or Freire (in Giroux 1989), for example, are shown as identifying the crucial role of schools and education in helping the working classes to gain knowledge as a source of power; and to understand their situation of historical struggle or exploitation (see also Brent 1983, Harris 1979). Such thinkers argue that the control of society can be achieved through hegemony in school; and they seek to make the educational sphere the principal arena, or 'dominant instance', through which a revolution in philosophy as praxis makes itself felt. Cultural semioticians also portray the curriculum, pedagogy and organisation of schools as ideological (Sturrock 1986). [22] Linguistics has influenced epistemological stances among teachers, Bakhtin's (1981) dialogic account of speech and thought, for instance, contributing to a view that 'argument' is a 'dialectical' process, even within the individual; and that the characteristics of rationality are themselves arguable (Myerson 1994: 148).

The accusation of 'being ideological' in wanting to teach philosophy or a pre-philosophical curriculum can, however, be countered by the claim that the pursuit of rationality *is* one's 'ideological' purpose. It is therefore acceptable to be ideological. This is Siegel's (1988) response to the 'ideological objection' when he argues that fundamental educational ideals, like critical thinking or rationality, can be justified without reference to some 'prior ideological commitment' as long as one adopts the liberal conception of ideology. He characterises the liberal conception as 'any set of directive ideas', the 'central tenets of a culture', or 'a framework of explanation and justification'. The Marxist notion of ideology, he argues, would fail to meet the criteria of this stipulative definition (64). [23] Whether we ought to embrace the thesis of ideological determinism, or any other thesis, depends for Siegel on precise reasons that can be mustered and on the rational force those reasons offer for a given claim: 'Thus it is rationality which is basic, not ideology' (73).

Some philosophers and linguists therefore wish to see both dialogic method and the notion of rationality kept open to *double arguability*, in some reformed model of relativism and rhetoric (Myerson 1994). Earlier discussions of *indoctrination* by philosophers of education also remain relevant to the ideological question (Snook 1972).

7. The case of English studies

There is similar evidence for the transcendental claim when one examines specific subject contexts, or domains. In the case of English studies, the teaching of a range of pervasive, 'embedded', philosophical assumptions and content is revealed (Davies 1990, Kress 1994). Davies (1990) shows a variety of strands in the extent to which English teachers have their own assumptions and practices, philosophical curriculum and pedagogy. These relate to several of the claims discussed in chapter 2. English studies has had a pre-occupation, for instance, with language and linguistic theory, as have had most contemporary philosophers and schools of philosophy. Oral teaching is seen by English teachers, just as it is by philosophers, as a key concern and method for teaching and thinking. Some topics within English studies require the formal teaching of some philosophical understanding in the context of literary hermeneutics and exegesis. English teachers explain the philosophical context of the Romantic and Enlightenment background to 18th century literature. Philosophical content is taught in explaining pantheism, the revolutionary ideas in the poetry of Wordsworth, and the cultural background of an emerging industrial society.

Much meta-analysis, and many meta-cognitive concepts in English studies, are essentially philosophical in nature. English teachers are constantly responding to the philosophical claims of post-structuralism, post-modernism, critical theory, deconstruction and discourse analysis (Eagleton 1983, Norris 1982, Swales 1990, Myerson 1994). English teachers bring their conclusions and assumptions about society and human purpose explicitly into their teaching. Philosophical systems and world-views rely heavily on their presentation or interpretation through the novel, poetry or the play - sometimes intentionally, as in the case of Sartre - and have an enormous effect on the teaching of English (Gibson 1984, 1986). A considerable body of discussion, essentially philosophical in import, is devoted to such themes in the specialist journals of English studies or critical theory (Davies 1990). [24]

Much work on *argument* in English studies draws on the developmental psychology of Vygotsky (1962, 1991) or the 'dialogical' theory of communication and imagination of Bahktin (1981), which emphasise social learning and reject the notion of passive communication or transmission of understanding. [25] Linguistic

specialists influencing English teaching stress the importance of communicative competence which arises through discourse communities (Appendix 15, Swales 1990). Similarly, reading development theory influences how children are taught to read. In the phenomenological method characterised as 'a psycho-linguistic guessing game', learning takes place through guessing what a particular word or phrase might mean in a particular context. There are no errors for a young child learning to read, only 'miscues' (Goodman 1972; Iser 1978, 1988). Psychological research on the positive role of 'uncertainty' in the learning process underpins this pedagogic strategy (Acredolo and O'Connor 1991).

However, the philosophical assumptions and ideas which are pervasively present, or embedded, in the minds of English teachers may not always be clearly perceived by them, or enunciated by them for the benefit of their students. Many philosophical perspectives and assumptions which under-pin the teacher's own view of the subject are not introduced to school students until late in their studies. [26] The case of English studies shows especially clearly how teachers who may have little or no formal training in philosophy, in fact teach an 'invisible pedagogy' and subject content pervaded by philosophical concerns and assumptions. [27]

8. Curriculum territoriality: the claimants

There is a great variety of contexts in the general curriculum, therefore, where philosophical matters are being dealt with by teachers. Some of these matters are a source of debate or contention among teachers, being examples of Gallie's (1956) 'essentially contested concepts.' It is not surprising, consequently, that the question often arises of 'who owns what knowledge?' in relation to the teaching of thinking and argument, critical thinking and philosophy for children. Some questions are contested in the sense of curriculum territory (Ball 1989). The importance of the *sociology of knowledge* in such contexts underlines the power of the transcendental argument (Young 1971a, 1971b; Young and Whitty 1976, see again chapter 1). [28]

English studies has been in the forefront in claiming a special place in the teaching of philosophy, argument and thinking; as, for instance, in an early proposal for a six paper syllabus in Philosophy and English at A level (Eaton 1984). [29] Andrews,

Costello and Clarke (1993: 233), Costello and Mitchell (1995) and others claim hegemony for English studies. English teachers should take the dominant role in the teaching of thinking, argument and rhetoric, 'an area of neglect in English teaching' (Clarke 1984), and more broadly in 'designing social futures' through a 'pedagogy of multi-literacies within hyperspace'. [30] Kress (1994) makes the claim, on behalf of the 'New London Group', that English studies is the 'unique, moral site' in which students' thinking in school occurs.

> The curriculum as a whole contributes to the development in human beings of what Pierre Bourdieu calls a 'habitus', a set of deeply ingrained dispositions which form a second nature and act as the a basis of habituated practices, often no long available for the individual's inspection. All parts of the curriculum have their part in this, the mathematics or science curriculum no less - perhaps even more so than the English curriculum. It is however only in the English curriculum where these issues are or can be made available for debate... English is the only site in the curriculum which can deal with questions of individuality in a moral, ethical, public social sense. (102)

A similar case is made on behalf of science education, however, as when Shayer (1991) and Adey (1994) claim that the effective foundations of inductive thinking which will transfer to other subjects can best be laid through 'cognitive acceleration' programmes led by science teachers (see again chapter 2). Others point to the fecundity of science in posing philosophical questions, as with the Heisenberg principle of uncertainty, or quantum theory, cosmogony, and parallel universes (Deutsch 1997, Phillips 1987). [31] In biology, topics such as animal rights, socio-biology, euthanasia and cloning, are said to raise a wide range of questions in ethics and moral philosophy (Singer 1993). Teachers of science claim to be at the leading edge of new approaches to knowledge and thinking (Fensham 1988, Phillips 1987). They are, more than most teachers, also concerned with teaching the counter-intuitive (see chapter 4).

Any whole school or college policy will therefore need to address questions of curriculum territoriality and ideology with great sensitivity. How this might be done in the context of an overall *philosophy and pre-philosophical curriculum* is addressed in chapters 7 and 8.

9. The importance of narrative, the hermeneutic perspective and tradition

The important argument is now introduced that an important feature of transcendental realism is its reliance on narrative provisionality. Narrative, taking Currie's (1998: 654) definition as 'the means by which a story is told, whether fictional or not', will emerge as one of the central concepts in the approach to a philosophical pedagogy which is begun here and amplified in chapters 4, 5 and 8. That the transcendental realist search should be seen in terms of narratology, hermeneutics and history appears not to have been envisaged by Bhaskar. A view which sees *narrative* as foundational to living as a person is argued by Bruner (1990), Schechtman (1996), Ryan (1996) and others. Narrative as 'self-portraiture' also emerges as an important concept in relation to notions of the conditional, counter-factual and possible worlds thinking (Schiffrin 1996). Macey (1990: 57) argues that the 'construction of plausible narratives is one of the ways in which human subjects assess and interpret their lives.' [32] Some philosophers of language also place importance on the centrality of ideas of narrative tradition and the canon (Hauerwas and Jones 1989). [33]

For MacIntyre (1981, 1984, 1989) the importance of narrative arises from the fact that any explanation or enterprise has by its very nature to take a narrative form related to virtues within a tradition. What a tradition of enquiry has to say, both to those within and to those outside it, cannot be disclosed in any other way. MacIntyre is critical of those post-Enlightenment thinkers who have a concept of rational enquiry which is seen as culture-free. For him rational enquiry is inseparable from the intellectual and social tradition. [34] MacIntyre (1981) argues in *After Virtue: A Study of Moral Theory* that man is 'essentially a story-telling animal', since the story of his life is always 'embedded' in the story of those communities from which he derives his identity.

> What I am, therefore, is in key part what I inherit, a specific past that is present to some degree in my present. I find myself part of a history and that is generally to say, whether I like it or not, whether I recognise it or not, one of the bearers of a tradition. It was important when I characterised the concept of a practice to notice that practices always have histories and that at any given moment what a practice is depends on a mode of understanding it which has been transmitted often through many generations. And thus, insofar as the virtues

> sustain the relationships required for practices, they have to sustain relationships to the past- and to the future - as well as in the present. (1981: 206-7)

Taylor (1989: 52) asserts that in our pursuit of 'the good' we must inescapably understand our lives in narrative form as a 'quest'. Nussbaum (1986), from the perspective of neo-Aristotelian literary theory, claims that narrative forms are the context for much important philosophical and other thinking. [35] In chapter 5, her claim will be examined that some philosophical understanding can be delivered only through the narrative experience of a play or a novel. Egan (1989, 1997) makes a strong case for story-telling as key pedagogic strategy for teachers promoting imaginative life in children. Schechtman (1996: 93) advances a *theory of identity* in which narrative is important in the lives of persons, and with Dreyfus (1995) argues for the individual embodiment of person within narrative self-portraiture. Schectman, draws on Dennett, Sartre and Heidegger, in proposing that persons are self-creating through 'narrative self-constitution'; and that one needs such a narrative self-conception in order to be a moral *agent* at all (159). [36] MacIntyre (1981, 1989) in effect argues for what Rorty (1984) would call the *canonical* (see chapter 6). For he emphasises the importance of *narrative* within a tradition:

> The narrative phenomenon of embedding is crucial: the history of a practice in our time is generally and characteristically embedded in and made intelligible in terms of the large and long history of the tradition through which the practice in its present form was conveyed to us; the history of each of our own lives is generally characteristically embedded in and made intelligible in terms of the large and long history of a number of traditions. (1981: 206)

Struever (1985), in discussing contemporary theories of historical discourse, concludes that history is an 'argument tradition' within a discourse community. For Struever, the constraints on the writing when a historian constructs an account of an event originate not only in the text itself, which might be as richly detailed and coherent a narrative as any novel, but in the discourse community of its production and reception. History is *argued narrative.* [37]

> Unlike the story-teller the historian must not only narrate arguments, he must also argue narratives. This argued narrative makes demands. The discursive criterion that distinguishes narrative history from historical novels is that history evokes testing behaviour in reception; historical discipline requires an author-reader contract that stipulates investigative

> equity. Historical novels are not histories, not because of a penchant for untruth, but because the author-reader contract denies the reader participation in the communal project. (264)

This viewpoint, when applied to the place given to the history of philosophy, or the canon of philosophical works chosen for study, integrates closely with the 'new hermeneutics' of Rorty (Kruger 1984). It links with accounts given by Ricoeur (1984: 5-8) of narrative identity and the hermeneutic 'circle of continual self-reflection' (Kearney 1988). [38] It involves the rejection of 'grand narrative' in favour of a local narrative and hermeneutic (Gallagher 1992), embracing a 'multi-voiced' view of the historian's task as being to provide an 'assemblage of narratives' (Evans 1997: 146-150). [39]

A perspective which emphasises narrative can be found in Gadamer's attempt to disclose the true nature of philosophy, and in particular its historicity, by relating it to art and the *Geisteswissenschaften* (Kruger 1984: 87). Gadamer has two principal theses: firstly, that the typical, and also the highest form of cognition in the human or social realm is not discovery or explanation of facts but understanding. Secondly that understanding is conceived not as an act of subjectivity, (i.e. an activity performed according to certain methodological rules), but rather as moving to one's place within the continuing tradition (Kruger 1984: 88). [40]

Gallagher (1992), in *Hermeneutics and Education*, helpfully adds to this picture. He distinguishes between four main approaches and competing definitions which are found in contemporary hermeneutic theory: the conservative, moderate, radical and critical (Appendix 32). Gallagher wishes to see adopted a *moderate, local hermeneutic* in which a 'hermeneutics of trust rather than suspicion' prevails, and in which classroom practices of play, self-narrative and self-understanding are given emphasis (28). His conception, I shall argue, is particularly relevant to a teacher's individual position concerning philosophical autobiography, pedagogic ethics and a response to *ironism* in one's professional thinking (see chapter 8).

10. Narratology, exposition and fiction

The hermeneuticism of MacIntyre, Nussbaum and Gallagher elevates narrative into a position of some philosophical prominence, especially in counter-factual thinking about 'possible worlds' and genres. 'Tell us the story' is a locution which features frequently in the argot of the professional philosopher and elsewhere. It means 'argue the narrative of how you reached your present position', and underlines the extent to which philosophers draw heavily on the mode of narrative exposition. Similarly, the attempt to counter another philosopher's position, or to solve a problem often takes the form of 'a counter-factual story' or counter-argument. Much philosophical discussion of the problem of identity is formulated in the counter-factual narrative of 'thought experiments', as Parfit (1988) illustrates. Even the shortest, short story can be used to put forward a philosophical argument. Scallen (1995) identifies a rhetorical narrative of 'legal story-telling' used in jurisprudence, in which stories do not simply illustrate a point but rather function as the evidence for the legal argument. These are examples of Nussbaum's (1989) embedded notion of meaning seen at work in a vocational and professional discipline.

Those who teach the young often wish to use the narrative form in assisting the development of thinking. Hughes' (1996: 286-292) textbook on critical thinking, for example, has a section devoted to story 'puzzle cases' and paradoxes.[41] Fisher (1996), Matthews (1976, 1984, 1994), and Sprod (1993, 1995) demonstrate the power of works written for children in which philosophical issues are raised. Lowe (1995) shows, for example, how through narrative *Alice in Wonderland* stimulates thinking about complex problems in philosophy.

There is a dimension of progression and the developmental to be identified here in relation to the conception of narrative. The phenomenologists Marton and Carlsson (1992: 1) show how students approaching a Kafka story arrive at a 'limited number of qualitatively different ways of understanding the parable'. Fox (1989b, 1990) and Berrill (1990) analyse how children's thinking moves from narrative and experience, through exposition, into argument. Fox (1989a) finds activity in dialogic, narrative discourse to be essential for developing the capacity for argument. Argument is construed by young children 'as discussion and negotiation between characters in a dialogue'. She makes a hermeneutic, transcendental claim similar to that of Nussbaum:

> It is in the practice of this kind of rhetoric at an early age that, in my view, all the linguistic and intellectual tools required for later 'rational' or 'disembedded' discourse lie ready to be used. (I placed these terms in quotation marks because I doubt whether there is such a thing as completely impersonal or disembedded discourse, though we like to think this ought to be the case when we are expounding a scientific theory or argument). (30)

The emphasis on the role of narrative in argumentative writing and thinking in the British setting is argued in a *Report of the Assessment of Performance Unit* (Gorman 1988):

> The use of narrative in our culture as a vehicle for persuasion is a mode of such long standing, and potential sophistication, that it would be a mistake to conclude that young writers are backwards because they respond to an argumentative task by producing a story. We do need to ask questions however about the ways in which such questions are conceptualised, and whether the same writers have any capacity to abstract from the narrative frame such key points of the episode as would serve to shape the logical underpinning of the general belief. If neither of these 'revisions' can be undertaken, it may well be that such children are for the moment stuck in one mode of written discourse, unable even to exploit that one for anything other than a recounting function. (154)

Furthermore, as Feezel (1995) illustrates for sports and physical education, the making of narrative and exposition is important in giving shape to our experience in all the curriculum areas. [42]

Berrill (1990) explores most fully, empirically and conceptually, the special relationship which seems to exist between *narrative, exposition* and *argument.* She finds that students rely strongly, in their writing, on descriptive generalisation which is 'in essence exposition rather than argument' (82-4, Appendix 8). [43] Like Paul (see chapter 2), Berrill identifies empathy as having a role in the approach to authentic exposition and argument. [44] She finds that the writing of exposition is a bridging stage prior to the production of proper argument - and thus offers an account of how *progression* occurs in the capacity for pre-philosophical and philosophical thinking. Berrill identifies an empirical relationship between *feeling and thought* in the transition through narrative, to exposition and then formal abstract thought (see chapter 5).

11. Speech acts, feeling and fiction

The importance of feeling, the affective as well as the cognitive dimension, emerges from the accounts given by Fox, Berrill and others (Damasio 1994, Dunlop 1984, Polanyi 1973, Scheffler 1991). This matter is further explored in relation to the dispositions and personal autobiography in chapter 5. One of the linguistic and epistemological difficulties to be raised, however, is the question of how far proof through narrative, exposition or argument, is hortatory - designed to persuade us through our feelings. Mitchell (1992a) is anxious not to lose sight of the affective aspect of argument, although unwilling to commit herself to a view on whether - in Searlian terms - some argument could be 'non-feeling,' neutral, or 'locutionary' only.

> We take argument to be *a process of argumentation, a connected series of statements intended to establish a position (whether in speech and/or writing)*, sometimes taking the form of an interchange in discussion or debate, and usually presenting itself as a sequence or chain of reasoning. We do not see reasoning as necessarily opposed to feeling, neither do we think *evidence* is necessary to the definition though we would expect most arguments to contain evidence of some sort, if not fully-fledged *proof*. Author's italics (20)

Is it through gradual, transitional stages of 'felt' narrative and exposition, that pure argument, neutral of feeling or emotion, is eventually arrived at? One solution to the problem of whether feeling is present in argument, what Gubb (1987) calls 'the confusion over whether to be hortatory or balanced and objective', is to appeal to Austinian (1962) or Searlian (1969, 1979) speech act theory.

Medway (1989) draws on Searle's distinction between the *illocutionary* and the *perlocutionary*. Illocutionary writing, for example a paragraph of information, does not set out with the intention of persuading, and is not hortatory. Any writing undertaken with a narrative intention would, however, by definition be percolutionary, since it sets out to persuade. Niniluoto (1985) argues that the author of a fiction text T can be viewed as performing an illocutionary act of recommendation of the form: 'let us imagine that T!' It could also be claimed that the hermeneutic account, which commits one to a view of argument as narrative moving the actor forward within a tradition, is necessarily perlocutionary (MacIntyre 1981: 206-7).

Thus Groake et al (1997) give an important place to notions of rhetoric and audience in their teaching of critical thinking as being concerned with reasoning.

Ryan (1991: 62), however, argues that there is a category of *narrative non-fiction* and gives the example of a problem in 'story math' (see Appendix 32). She is uneasy about accepting speech act theory, since it is open to a criticism made by Searle himself: that we presuppose the existence behind every textual utterance of 'true-self', an authentic, self-consistent, essential subject. There are various objections to this view, however. For example, we can ask what would be the position concerning automatic writing, as in the case of Enid Blyton (McKellar 1979: 81-83), or a writer like Pessoa (1974) who writes poetry within several pseudonymous 'multiple identities'? [45] Such discussions underline the need for some means of identifying authentic, introspective thinking (chapter 8). There is a further difficulty with a Searlian account, especially if one accepts Siegel's view that rationality carries its own, intrinsic persuasive force, critical thinking being 'the educational cognate of reason'. For on the deconstructive view (Derrida 1976), Norris 1982, Pavel 1986), any text containing a reasoned argument *could* be read as perlocutionary, irrespective of its register or authorial intention. All texts will be susceptible to readings based on feeling. Pavel (1986: 80) claims, for example, that fictionality is in fact a 'historically variable property', citing how erosion of belief in Greek deities made their adventures available for fictional treatment in tragedy and epic poems. [46]

This is an important point, since it underlines the narrative provisionality of transcendental realism, including the constant possibility that one possible world may turn into the domain of another. It is also consonant with the notion of the paradigm shift (Kuhn 1970) and with the ideas discussed in chapter 2 of cross-intelligence, cross-domain, or sensory 'stochastic' thinking (see also chapter 4).

The objection takes on additional force if one accedes to the post-modern emphasis on tentativeness and 'playfulness' (McHale 1987). If all explanation is seen as 'historically variable' the notion of a permanent methodological gap between different subjects, as in the case of the 'two cultures' of science and the arts, tends to evaporate. Any account in, say, physics will be just as provisional or metaphorical an account as one in a novel, play or poem.

Bruner (1986) is therefore in my view mistaken when he asserts in *Actual Minds, Possible Worlds* that there are two different ways of approaching reality, the scientific and the literary; the one responding to thinking about cause and effect, the other being narrative and concerned with making *possible worlds* (see chapter 4, Nash 1990, Olson 1990, Pavel 1991). If scientific, like philosophical explanation is only a provisional dogma or story, as Francoeur and Francoeur (1994) or Mashhadi (1997a) argue an antinomy between these two areas is then not sustainable. In chapter 4, I shall therefore maintain that the use of 'transcendental modal realism' and possible worlds theory as one's philosophical pedagogy removes a spurious distinction between scientific, and other types of thinking or argument.

Can narrative, didactic fiction, written specially to teach philosophy, succeed? If we agree that the 'thought experiments' and short stories of argued narrative used by philosophers are effective, then the possibility that longer stories will be successful clearly exists. It can be argued that many examples of longer fiction in teaching philosophy can be identified such as the *Dialogues* of Plato. Some philosophical fiction written with a didactic purpose has been universally acclaimed, for example Voltaire's *Candide* or Orwell's *Animal Farm* in the field of social and political philosophy. The allegory, utopian fiction, or the roman à these have all been attempted with a teaching purpose in mind.[47] However, the relative lack of merit of the *Institute for the Advancement of Philosophy with Children's* (IAPC) materials as children's fiction underlines the need for considerable literary expertise on the part of those writing didactic fiction for teaching philosophy. The best-selling philosophical novel, *Sophie's World* (Gaarder 1995) has met with a very critical response from some philosophers.[48] Gooderman (1997: 63) suggests that it is the writer's conceptualisation of childhood, reflected in the approach to a young audience, which is crucial, especially in the case of moral education. He identifies four possible styles of writing, three of which are didactic and often ineffective, and therefore best avoided. It may also be important to distinguish between narrative, fiction and literature. Ryan (1991), whose approach to possible worlds and narratology is discussed in more detail in the next chapter, attempts to do just this (Appendix 32).

12. Can a pre-philosophical curriculum be distilled out?

This chapter has put the case for a position of transcendental realism supported by a particular approach to the theory of narrative. The question then arises: can all of this embedded, pervasive philosophical content be distilled out and taught ? Can all the philosophical ideas which are found in the teaching of individual subjects be separated out and re-assembled as a discrete philosophical syllabus, or as separately taught pre-philosophical curriculum? Should meta-thinking, or philosophy be taught as such? Having assembled the evidence for the pervasive presence of philosophical questions and assumptions in our educational arrangements, do we want to draw the identified content together to make a subject called philosophy for schools?

Chapter 1 traced how, historically, philosophy emerged as a separate discipline out of developments in epistemology and logic which were associated with scholasticism. Such an argument is consonant with the case that 'thinking' and philosophising are hermeneutically located within particular traditions of historical and narrative continuity. Some philosophers mentioned in chapter 2 argue, like Nussbaum or McPeck, that subject study is prior to meta-cognitive thinking in general, and therefore should have primacy. Meta-cognitive thinking, or early philosophising is not to be seen as a generalisable form of discourse, but rather as a set of discourses which inhere in particular, specific, and usually subject forms of knowledge. However, I wish to claim that it is necessary to decide upon, and possible to have criteria which distinguish thinking which can be taught separately, meta-cognitively and generalisably, from that which must be left within a subject content or experiential area. I propose that, despite circumstances of curriculum territoriality and 'contestedness', a canon can be arrived at for *a pre-philosophical and philosophy curriculum* which combines the two aspects. The question of how a curriculum and whole school or college policy should then be organised is addressed in chapters 6 and 7.

Notes to chapter 3

1 Since Kant, the transcendental argument has been used in various attempts to refute scepticism. If a sceptic argues that we are not justified in belief that there is an external world, the transcendental argument is used to show that such a belief is a necessary condition in order for our discourse and experience to occur at all. Siegel

(1987, 1988) advances such an argument in defence of the 'ideological' commitment of critical thinking to rationality.

2 Bhaskar (1978, 1986) offers a form of post-Kantian categorical argument. Order in nature is not between things and events, but between 'pure' generalities uncontaminated by time, space and context. For him the assumption of the truth of transcendental realism is the condition for the existence of science in the first place; and all scientists are transcendental realists even if they protest that they are empiricists. *Transcendental realism*, rather than *critical realism*, is the term used throughout the discussion here, since it more accurately represents Bhaskar's philosophical provenance, as opposed to the movement he has inspired.

3 Even the most extreme advocates of the discovery method or Bruner's (1986) 'spiral curriculum' do not claim such a position.

4 Whereas Popper (1959, 1960) gives too much authority to the teacher in emphasising scepticism, and the elimination of theories by demonstration of their falsifiability, Bhaskar's account leads to methods of teaching other than those which merely involve the transmission of knowledge. They should encourage the learner to be autonomous, to question the world, generate hypotheses and be critical of 'provisional dogma'. Bhaskar's account encourages a pro-active, more dynamic view of teaching and learning sympathetic to social constructivism, 'possibilism', imagination, playfulness and creativity, which has been lacking in the traditional approach to science and science teaching. Bhaskar has incurred strong criticism from some philosophers: see, for example, Luntley's (1995) hostile review of Bhaskar's (1995) *Plato Etc: The Problems of Philosophy and Their Resolution.*

5 For Bhaskar, we really do break through to some version of the truth; access to the intransitive realm is access to a form of truth. Bhaskar disagrees with Popper's assertion that all scientific truths are provisional dogmas since for him the real world is knowable.

6 See Corson (1988, 1990a, 1990b). This claim can therefore be linked with the hegemonic claims made by Freire and Gramsci (see Giroux 1989). The version of ethical and epistemological transcendentalism offered by Sartre (1958), particularly his notions of 'facticity' and 'transcendence', can be also used to support the pedagogic implications of the Bhaskarian account (Catalano 1985, Macann 1993).

7 It can also be argued, if noumenal absolutism is set aside, that this need will never abate. The exceptional individual, or auto-didact, may of course acquire sufficient personal autonomy and educational skills to manage unsupported by institutions of learning and teachers. The distinction between education and schooling is an important one. For most people, life-long *education permanente* will be required.

8 Newmann (1990: 52) provides a practical scheme for dealing with the provisionality of explanation by encouraging students to exhibit 'curiosity and scepticism' and an awareness that not all assertions emanating from authoritative sources are absolute or certain. This he links with the need for students to generate 'unconventional ideas, explanations, hypotheses or solutions to problems.' Bhaskar does not deal with the question of how far one defers to the discourse community (Swales 1990, Myerson 1994), the community of enquiry (Lipman and Sharp 1978a), the community of scholars (Kuhn 1970), or the dominant instance (Althusser 1971) in relation to a *canon* of transcendental realism.

9 In terms of the argument of this thesis, I would combine epistemological, aesthetic, ethical and metaphysical possibility.

10 Notions of the 'reflective practitioner' (Schon 1983) and 'teacher thoughtfulness' (Newmann 1990) are discussed more fully in chapter 8.

11 It may then be claimed that a philosophical position should be taken up by every school and teacher in a formal school policy, not only for curricular provision but also

in relation to rights and responsibilities concerning access to the curriculum (chapter 7).

12 Greenfield (1983) takes the 'phenomenological' position in criticising the apparent assumption that organisations are not only real but also distinct from the actions, feelings, and purposes of people. He claims that there are two contrasting views of social reality. Realism, which is characteristic of the systems approach, assumes that the world is knowable as it is, and that organisations are real entities with a life of their own. The phenomenological, or idealist perspective postulates that the world exists, but different people construe it in very different ways, reality being 'socially defined'. Greenfield is consequently impatient with the mistaken belief in the reality of organisations, a reification which diverts attention from the human actions and intentions. This example is unusually transparent in demonstrating the extent to which philosophical assumptions pervade in management theory. Greenfield is unusual in couching much of his critique in recognisably philosophical language.

13 However, the language of relativism that such theorists use is laden with problematic, philosophical assumptions (McCann and Yaxley 1992). Here is an important area in which philosophers can help the forming of 'whole' school or college approaches (see chapters 7 and 8).

14 Strawson (1959) in *Individuals* wishes to avoid the vices of 'speculative' metaphysics, in favour of a 'descriptive metaphysics' which will concern itself solely with analysing our concepts of the actual structure of our thought about the world (Lacey 1976: 129). For a detailed discussion of the educational issue see O'Loughlin and Campbell (1988: 25-33).

15 An example of such a task is proposed by Thornbury (1996), who argues for closer links between philosophical accounts of authenticity and the education management concept of 'collegiality'. See also chapter 8.

16 These were: 1. the truths of formal logic and mathematics; 2. the truths of physical science; 3. awareness and understanding of our own and other people's minds; 4. moral judgements; 5. objective aesthetic experience; 6. religion; 7. philosophical understanding.

17 Hirst (1993) subsequently revises his account (Walsh (1993: 139) to emphasise more the 'intelligence that is acquired and exercised in educational practice' and which recognises the 'tacit theory' which is continually extended and 'made explicit' by practitioners working in common (44). Hirst has thus moved more towards a hermeneutic perspective compatible with MacIntyre's notions of tradition and continuity.

18 Phenomenographers are constructivists who believe that there are a finite number of possible ways of seeing a problem and its solution.

19 *Classical humanism* is said to concentrate on a curriculum focusing on cultural heritage and the passing on of the highest achievements and products of the arts, sciences and other areas of human endeavour. *Progressivism* stresses 'children-centred' approaches, discovery-learning and the child's freedom to explore his/her own interests. *Reconstructionism* sees education as a means of improving society, as a force for planned progress and the development of a democratic community. *Instrumentalism* envisages the main purpose of the curriculum as being to prepare children for adulthood - working life, leisure, parenthood, citizenship. (Skilbeck 1976).

20 The social-political, economic, communication, rationality, technology, morality, belief, aesthetic and maturation sub-systems.

21 Blacker (1994) argues, however, that 'good constructivist pedagogy' needs to be rescued from the 'deficient theory that parented it' (303). See Watts and Bentley (1991: 171-182); and Gilbert and Swift (1985: 681-696) who argue that any 'strong'

version will involve a complex, coherent and self-consistent set of beliefs and classroom practices, including considerable attention to *alternative conceptions.*

22 'Bahktin, who was primarily but far from exclusively a student of literature, expected to find material evidence of the various ideologies competing in any society in every kind of cultural manifestation. Indeed, this was for him the *only* evidence discoverable for the existence of ideologies, which are not private and immaterial forces in social life but public concrete ones. Bahktin thus installs a potent tradition of Semiotics as revelation' (Sturrock 1986: 90).

23 'Contrary to this conception of ideologies as undesirable and as something to be overcome, ideologies... are not something to overcome; they are, rather, necessary for thought. The critical task is then not to forswear ideology, which is impossible, but to adopt the best ideology one can. This sense of 'ideology', unlike the Marxist sense...takes ideologies to be necessary' (65).

24 Davies (1989) shows for the *social movement* of English studies (and the same can be argued for other subjects) that among practitioners there are competing rationalities and 'contested' conceptions about the meta-cognitive foundations of their discipline. English teachers within the NATE (National Association of Teachers of English) have been territorially agile, for example, in asserting the hegemonic possibilities of the 'Electronic English' for their subject. But Snyder (1997: 31) also points out that 'the historical record shows that many English teachers have tended to resist the new technologies'. She argues that the future lies with inter-active hyper-text and hyper-fiction. See the relevant issues of *English in Education,* Vol 31, no 2 (1997), for a series of articles on the theme of English teachers and computers, 'hyperfiction', 'electronic English' and 'cyberspace'.

25 Bakhtin (1981) argues that all communication must be a dialogue between individuals in which listeners and speakers both play active roles. The listener receives the word from the speaker, but that reception carries with it a mental act which requires the listener to understand the world from the speaker's point of view before approaching it from his own point of view. Vygotsky's (1962, 1991) account of socially 'assisted' learning has been similarly influential.

26 For instance, not until the sixth-form will a philosophical stance on deconstruction be conveyed in formal language to pupils. Yet the English teaching by that department of that pupil for several years already may have been predicated on such a position. English teachers may lack philosophical competencies which would enable them to have more sophisticated, and possibly different, philosophical positions and practices. But as Ree (1978, 1992) points out, philosophy has not been good at building bridges either. John Dixon (1994) argues 'the excitement over Derrida would not have occurred if English teachers had been more aware of the habit of Ayer, Joad and others insisting on it all depends what you mean'. English studies in England had little need of a deconstructive initiative since there was already an extremely strong tradition in textual analysis and exegesis. (*Personal communication*)

27 This problem with which each individual teacher and the staff as a whole must come to terms is examined again in chapter 7.

28 Two examples may be offered. Set theory is claimed by the mathematicians but is actually involved in all thinking. The *SRA Think Labs* (1980) for teaching comprehension and logical thinking skills contain many verbal problems which draw on set theory, but are not seen as mathematics materials. The widespread use of the *Prisoner's Dilemma* puzzle illustrates how there is no natural or essential curriculum setting for a philosophical teaching-point. It is found in business studies, geography, health education, logic, peace studies, and games theory in maths. The need to plan the appropriate revisitation of philosophical topics within a *spiral curriculum* is essential in putting a whole school or college policy in place (see chapter 7).

29 The *Philosophy* papers were to cover: Philosophy, Logic and Psychology; and the *English* papers were to cover: Linguistics, History of English Language and History of English Literature.

30 Clarke concludes, as assessor to a major funded project: 'A starting assumption was that arguing is so much a matter of language that it is the natural property of the English teacher, primary or secondary: 'Let's try some philosophy in the secondary school', he adds (Andrews, Costello and Clarke 1993: 23). One way of pursuing a claim for curriculum hegemony is to provide resources for teaching argument, as Clarke and Sinker (1992) have done.

31 Some argue like Bhaskar (1986), however, that positivism in science based on the empirical methods of the natural sciences has proved anti-philosophical. The tendency of positivism was to reduce the life of ideas to a cult of verifiable, or falsifiable certainty. The mechanicist fixation upon objects and facts is accompanied by a neglect of the human, historical and structural factors which determine, in the final analysis, *the meaning* of such facts (Mashaddi 1997a, 1997b, Mashaddi and Kahn 1997).

32 As chapter 4 shows, counter-factual history leans heavily on the notion of the plausible. Possible worlds theorists argue for the closeness, or accessibility, of such worlds.

33 There is also the consideration that memory and previous knowledge are central to the notion of a canon. See Alexander et al 1994, Bloom 1994, Fincher-Kiefer 1992, Neisser 1982.

34 'Abstract the particular theses to be debated and evaluated from their contexts with traditions of enquiry and then attempt to debate and evaluate them in terms of their rational justifiability to *any rational person*, to individuals conceived of as abstracted from their particularities of character, history and circumstance, and you will thereby make the kind of rational dialogue which could move through argumentative evaluation to the rational acceptance or rejection of a tradition of enquiry effectively impossible' (MacIntyre 1988: 398-99). His position is similar to that of Nussbaum (1986, 1990) who argues that texts are inseparable from the experience of the philosophical ideas that they present. MacIntyre thus sets the context for the importance of narrative in all philosophical activity. This has importance also for the hermeneutic claim.

35 This does not prevent Nussbaum herself, for example, from writing in the meta-discourse of philosophy.

36 In Schechtman's (1996: 2) account the four features of personal existence which are crucial are: *survival, moral responsibility, self-interested concern* and *compensation* (for present sacrifices by later benefits).

37 There is a strong resemblance to Kuhn's (1970) account of how scientific revolutions occur only when scientific communities change their beliefs.

38 Ricoeur begins this account in *Hermeneutics and the Human Sciences* (1981) and continues it in the three volumes of *Time and Narrative* (1984, 1985, 1988). Kearney (1988: 17) undertakes a discussion of 'narrative identity' in relation to imagination. See also chapter 4.

39 Other contemporary historians wish to reject narrative history as inappropriate to the post-modern context. Some, like Zeldin, replace narrative history with a 'pointillist' technique of writing, for instance; and the post-modern critics have claimed that historical narrative is to be distrusted as 'inherently anti-intellectual', a form of 'tutelary narration', and the 'discourse of bourgeois society' (Evans 1997: 149).

40 Kruger claims that understanding in the sense of moving to one's place in the tradition breaks with the idea of an unaffected observer. It also enables, for the

purposes of this study, a direct connection to be made with notions of empathy, the body-self and embodiment perspectives in constructing a *philosophy and pre-philosophical curriculum.*

41 A well-known example would be Russell's (1912: 76) memory paradox, which asks 'What would it be like if this world, with all the memories of it that we have, had been created only five minutes ago - and us with those memories?' Interestingly, Ryan (1991) would not classify this as a fictional narrative.

42 Any pedagogic and curricular stance in relation to a philosophy and pre-philosophical curriculum should, in my view, attach considerable importance to Berrill's account of the development and assessment of written thought through a stage of exposition. Feezel (1995: 95) likewise argues that our stories about sporting events attempt to give shape to our otherwise amorphous and fragmentary experience. He cites the example of Antoine Roquentin, in Sartre's novel of that name, who makes the discovery that the way to deal with la nausée is to make up stories.

43 'They seem to be exploring the underlying assumptions which are brought to the argument, possibly trying to establish a common ground of understanding which is necessary before rational argument can take place...If sixteen year olds are writing exposition when we expect them to write argument, they may be showing us more than we ourselves know about the nature of socio-cognitive development' (Berrill 1990: 84).

44 'It may be that these sixteen year olds are attempting to acknowledge the validities of the opposing points of view and to demonstrate the validities of their own position...[They had been asked to write about their relationships with their parents]...Writers of developed argument incorporate an appreciation of the validity of alternative points of view in theirs, usually from the outset as well as through the argument...Once we recognise the presence of this appreciation in the writing of our pupils, we need to give them strategies for condensing their understanding rather than having their explanations dominate the writing as it does in these papers' (Berrill 1990: 84).

45 In a correspondence with Blyton between 1953-7, McKellar (1979: 82) examined her claim that she could both write a story and read it at the same time: 'Sometimes a character makes a joke, a really funny one that makes me laugh as I type it - and I think "Well I couldn't have thought of that myself in a hundred years". Then I think, "Well, *who* did think of it then?"'

46 For a fuller discussion of fiction, narrative and possibility, see chapter 4. A good modern example of this phenomenon can be seen in the way the myth of Icarus was in effect metamorphosised from myth into legend, upon the arrival of the hang-glider in the mid 20th century.

47 Matthews has developed the discussion of stories for their philosophical content into an art form: see Matthews (1976, 1978, 1980, 1984, 1994). Murris (1993a, 1993b) attempts the same task with early childhood picture books. The creation of a searchable, public data base classifying the entire range of children's (and adult) fiction in terms of the philosophical issues they raise, would provide a resource of great value.

48 *Sophie's World: A Novel About the History of Philosophy* (Gaarder 1995) was written by a teacher of philosophy to encourage student engagement with the subject. Ree's (1995) hostile review highlights notable pitfalls that can arise within the genre.

CHAPTER 4

Parallel, possible and plausible worlds

There are more things in heaven and earth, Horatio, than are dreamed of in your philosophy. (Hamlet: Act 1 Scene V: 165)

Suppose some adult had told a child that he had been on the moon. The child tells me the story, and I say it was only a joke, the man hadn't been on the moon; no one has ever been on the moon; the moon is a long way off and it is impossible to climb up there or fly there. If now the child insists, saying perhaps there is a way of getting there which I don't know etc. what reply could I make to him? But a child will not ordinarily stick to such a belief and will soon be convinced by what we tell him seriously. *Wittgenstein, speaking in 1950* (Wittgenstein 1992:107)

1. The context of counter-factual and possible worlds discourse

This chapter presents an inter-disciplinary argument that the study and teaching of possibility, arising from conditionals and counter-factuals, must feature strongly in the educator's approach to thinking. The argument leads to a revised classroom approach to narrative, imagination, subject teaching, cross-domain thinking, creativity,

embodied identity, and memory. There are major implications, too, for ethical life, the dispositions and virtues which will be addressed in chapter 5, and also for public intellectual life (see chapter 8).

Throughout the history of thinking there have been numerous examples of the failure of predictive vision, especially in cross-domain thinking, by public intellectuals having expertise in the relevant fields. For example the philosopher, mathematician and engineer, Wittgenstein, searching in conversation in 1950 for an example of an inconceivable event, seized on the idea of putting a man on the moon. Yet within a very few years, on July 29th 1969, the US. Apollo space mission landed on the moon. How could Wittgenstein have made such a mistake? After all, he was in touch with the scientific community and therefore aware of the reasonable possibility of a moon-landing within a few years. How can educationists ensure that the young learn to avoid such solecisms as Wittgenstein's error?

Chapters 2 and 3 argued that transcendental realism involves a continual search for further meaning or new paradigms. Education would often be a finite activity if this were not so. This chapter will argue that conditional, counter-factual *possible worlds* discourse and talk is desirable for practical and for general as well as philosophical reasons. Such thinking flourishes, transcendentally, within the general culture from which our curriculum will be drawn; and is an indispensable feature of the *pre-philosophical education* of the young. A philosophical position and pedagogy for the teaching of *philosophy and the pre-philosophical curriculum* is needed which encourages continual questioning of the world, through empirical, metaphysical (Loux 1979), and *stochastic* speculation about counter-factual and possible worlds. [1] A renascent branch of philosophy which concerns itself with conditionals provides a foundation for new ways of thinking about possibility (Divers 1997).

2. Inter-disciplinary and cultural interest in counter-factuals

The appeal of counter-factual thinking and possible worlds thinking is illustrated by its popularity in fiction and film (Rubin and Ramis 1993, Herman 1994) and poetry (Karon 1993). Notions of the literary and fiction are much discussed by philosophers and theorists (Lewis 1983b, Ryan 1991, 1995c). The contrast in consistency

between literary possible worlds and real-life is popularly explored in 'puzzles in classic fiction' which ask such questions as *Can Jane Eyre Be Happy?* (Sutherland 1997). A growing phenomenon in the television media has been the making of 'hypotheticals', educational or other programmes where professionals and experts consider the unfolding of imaginary scenarios (Millson 1994). [2] The director Jonathan Miller (Benedict 1996) claims that the theatre is essentially a playful, 'counter-factual enterprise': and the experimental plays of Ayckbourn, Brecht, Brook and Wilson illustrate the particular fecundity of drama in treating 'possible worlds' problems (Counsell 1996). [3]

Visual, perceptually 'impossible' worlds have been devised by the mathematician Escher and others (Hofstadter 1979). Counter-factual 'sci-fi' examples have been much used to illuminate discussion of personal identity, time travel and other matters in philosophy (Clark 1995, Ehring 1987). Science fiction has long-standing links with philosophy and metaphysics, as Clark (1995) in *How to Live Forever: Science Fiction and Philosophy*, and others have shown (Miller et al 1990, Philips 1984, Skyrums 1976). [4] The widely-used *Cornell Critical Thinking Test* uses a counter-factual science fiction scenario based on an imaginary planet on which a group from earth have landed in search of an earlier expedition (Ennis and Millman 1982, 1991:19).

A swathe of professional disciplines including science, cosmology, mathematics, history, economics and psychology, have each generated a large literature looking at applied conditional and counter-factual thinking. Counter-factual and possible worlds have been used in explanation and hypothesis in the subject disciplines of science and mathematics; in physics, for example, in the notion of parallel universes in quantum theory; or in the idea of morphic resonance in biological science (Wolf 1990, Sheldrake 1988, 1994); and increasingly in psychology (Byrne 1997, Eysenck and Keane 1994). Specialist thinkers in maths and computing have engaged in the creation and exploration of rule-bound, deductively-based, micro-worlds, probabilistic systems and 'virtual reality' (Boden 1994, Bliss and Ogborn 1989, Pearl 1988), and imaginary architectural worlds (Hofstadter 1979). Notions of the conditional and counter-factual have influenced decision game theory (Stalnaker 1996, Bicchieri 1998), air-traffic control (Cavalcanti 1995), theorems about human behaviour in economics and management theory, and stochastic theory in mathematics. Sports sociologists have looked at counter-factual thinking in Olympic athletes (Medvec et al

1995, 1997), criminologists at violent crime (Nario, Redmond and Branscombe 1996), and lawyers at torts and juries (Feigenson 1995).

Psychologists see counter-factual thinking based on 'mental models' as providing clues to the links between cognition and emotion (Byrne 1997, Garnham and Oakhill 1994). Schemata, frames and scripts (Eysenck and Keane 1995: 261) are used to chart the planning of ethical intention and action. Work of considerable interest has been undertaken by cognitive psychologists on inferential aspects of children's counter-factual and causal reasoning (Harris et al 1996). Children's thinking about magical events seen as counter-factual occurrence and reasoning has been reported in a growing literature (Harris 1994, Chandler and Lalonde 1994, Rosengren et al 1994). The idea of thinking modally can also be linked with new psychological and neurological theories which argue that cognition and emotion are linked (Byrne 1997, Rolls 1997, Damasio 1995), and that intelligence and thought appear in different forms, sites or sensory modalities (Gardner and Perkins 1989, Sternberg 1985, 1988; Perkins 1994, Baron-Cohen and Harrison 1994, Pinker 1994).

3. Philosophical discussion of conditional, possible worlds

As Dudman (1991) points out, the *conditional* idea has long fascinated speculative minds, and especially philosophers: 'the result is that there are hundreds of philosophers in the world today 'who care how *if* works in English'. [5] Important advances in technical, analytical philosophy in the areas of indicative conditionals, counter-factual theory by Kripke, Lewis and Stalnaker have built on earlier interest by Leibniz and Giordano Bruno (Ashworth 1998, Edgington 1995). Other philosophers have explored the related area of *thought experiments* (Sorensen 1992, Gooding 1998).

Philosophers give a range of different accounts of conditionals, possible worlds and their truth claims which, drawing on a tradition with beginnings in Platonism and Neo-Platonism, informed many of the concerns of scholastic philosophy and the medieval world view. The intellectual tradition of a *Great Chain of Being*, referred to in chapter 1, can be seen as historically coterminous with these developments. Having originated with Giordano Bruno (Ashworth 1998) and medieval cosmology as a

concern with plenitude and perfection in worlds perceived as a *scala naturae*, or ladder of nature, the Great Chain of Being emerges in Enlightenment mode in the *possible worlds* of Leibniz. It persists into the Victorian period, flourishing in Darwinian beliefs concerning 'missing links' in the Chain, and again in the nanotechnology of microscopy. It re-appears in the later twentieth century in cosmology, and in the neo-scholastic philosophy of modal worlds. It adopts a philosophical style focusing on logic, metaphysics, ontology, and conditionals, as opposed to the epistemological and linguistic preoccupations of the dominant tradition in early twentieth philosophy (Divers 1997, Lang 1990). [6] The *many inhabited worlds* emphasis of the Great Chain of Being depicted by Lovejoy (1936) re-emerges as *combinatorialism* in possible worlds and dispositional theory, when different rules apply for people than for things (Armstrong 1986, 1995).

Interest in conditionals in the modern period originates in Kripke's (1963) attempt to solve problems in formal linguistics. Kripke provides a technical foundation upon which logicians and metaphysicians subsequently revive their interest in neglected questions of ontology and modality in philosophy, or theodicy or cosmology in philosophical theology (Plantinga 1974, Macintosh 1994, McKim 1984).

Most philosophers formulate their theory of conditionals by offering an account of the truth conditions of a conditional, specifying the conditions under which 'if A then B' is true, and those under which it is false. Some philosophers concentrate instead on the conditions of acceptance or justified assertability of a conditional, offering some account of the probability conditions under which 'if A then B' is wholly acceptable, or acceptable to a certain degree. Although the two approaches are often seen as opposed, as Jackson (1991: 1) points out the ideal would be a plausible account both of the truth conditions and of the acceptance conditions of conditionals combined with 'a story which explains each in terms of the other'. Edgington (1991, 1995) having considered the acceptance conditions put forward by others, considers however that conditionals do not have truth conditions. [7]

The most widely discussed problem concerns an *indicative conditional's* acceptance or (justified-assertion) conditions. This identifies the acceptability of 'if A then B' with the conditional probability of B given A. For instance, how reasonable it is to assert that if Clinton does well in his first term then he will be re-elected, is decided by how probable it is that Clinton will be re-elected given he does well in his first term? [8]

Many philosophers have argued that there are *indicative* conditionals on the one hand, and *subjunctive or 'counter-factual'* conditionals on the other hand. Indeed, one formal description of a counter-factual conditional is that it is a 'subjunctive' conditional. Adams (1965) defines the difference between the two in an example much discussed in the philosophical literature. To say 'if Oswald had not killed Kennedy, then someone else would have', is to use a subjunctive or counter-factual conditional. Someone using an indicative conditional, on the hand, says 'if Oswald did not kill Kennedy, then someone else did'. Adams claims that the switch in mood can make a great difference to our intuitive response: for, although many doubt whether if Oswald had not killed Kennedy someone else would have done, everyone agrees that if Oswald did not kill Kennedy, then someone else did (Adams 1965: 166-97). In the first case, no facts are established. In the second case, one part of the equation is a known fact. One postulation deals with the facts, the other does not.

Some philosophers wish to offer truth conditions for both indicative and subjunctive conditionals, but truth conditions which differ. Lewis gives *possible-world* truth conditions for subjunctive conditionals and *material* truth conditions for indicative conditionals (Lewis in Jackson 1991: 7).

4. Modal realism: the position of Lewis

It is only Lewis (1986) who takes the philosophical position of full modal realism known as *possibilism* (Tomberlin 1996). Most other philosophers of conditionals take the position of *actualism*, that there are many possible worlds worth identifying but only one which exists. Possible worlds are defined by Lewis as stipulative situations or states of affairs which are free of internal inconsistency and which therefore do or can exist. The term *possible world* is employed to denote a situation or 'world' which, whether or not it in fact exists, nevertheless could do so. [9] Our world, for instance, consists of us and all our surroundings, however remote in time and space they may be. But there is a plurality of worlds, our world being but one world among many other, countless other worlds, which are very inclusive things.

> The worlds are many and varied. There are so many other worlds, in fact, that absolutely every way that a world could possibly be is a way that some world is. And absolutely every

> way that a part of a world could possibly be is a way that some part of some worlds is. (Lewis 1986b: 22) [10]

Lewis is radical then in proposing that all *possible worlds* can or do exist; but his position is seen as prohibitively costly in philosophical terms by his critics (Divers 1994, Felt 1996, Maudlin 1996). [11]

Lewis argues that of the various possible worlds which can or do exist, all are *indiscernible* and inaccessible from our present world. He dismisses as *ersatzism*, the notion that 'instead of an incredible plurality of concrete worlds, we can have one world only, and countless abstract entities representing ways that this world might have been', which is the position taken by most actualists. [12] Lewis claims that the hypothesis of a plurality of worlds is serviceable in helping us to address problems, as well as there being reason to think it is true (1986b). [13] Discussion as to whether a possible world has material facticity thus parallels debates in traditional epistemology over correspondence as opposed to coherence 'truth claims' for the existence of an external world. [14]

Lewis (1986b) concludes in *On the Plurality of Worlds* that modal realism needs *counter-part theory* to make sense of our modal claims about ordinary individuals, an idea which has been much discussed. For Lewis, individuals are *world-bound* in the sense that they are in the actual world and no other, but a world-bound individual typically has *counterparts* in other possible worlds. He argues against accepting trans-world individuals either as: 1. individuals which exist at different worlds by being wholly present at different worlds; or 2. as mereological sums which exists at different worlds by having parts at different worlds. Each object exists in just one world in his account. Hale (1991) and others claim that, on the contrary, trans-world individuals taken as mereological sums can play the roles of ordinary individuals - and so modal realism does not need counterpart theory to make sense of modal claims.

Lewis emphasises the link between conditionals and *probability* theory, a view which is shared by other philosophers (Goodman 1965; and see Edgington in Thornbury 1997a). Assertability goes in general by probability, because probability is probability of truth and the speaker wants to be truthful. Probability, as seen in chaos theory and stochastic process, is appealed to in attempts to apply the philosophy of possible worlds to historical thinking (see sections 6-8 below). [15]

A rather different approach to indicative conditionals and subjunctive counter-factuals is that of Stalknaker, who gives a similar 'possible worlds' account of both types of conditionals, but asserts a difference in terms of pragmatics rather than semantics or truth conditions (Stalnaker 1976, 1988, 1991a, 1991b). [16] Stalnaker makes an innovative link between the semantics of conditionals and the probability theorist's notion of a conditional probability. He considers we should evaluate a conditional in a particular way. [17] For Stalnaker, it is appropriate to make an *indicative* conditional statement or supposition only in a context which is compatible with the antecedent. So he defines *counter-factual* conditionals as conditionals whose antecedents are assumed by the speaker to be false. He suggests the following rule for constructing a counter-factual conditional:

> First, add the antecedent (hypothetically) to your stock of beliefs; second, make whatever adjustments are required to maintain consistency (without modifying the hypothetical belief in the antecedent); finally, consider whether or not the consequent is then true. (142-3)

This amounts to saying that all counter-factual conditionals must be expressed in the *subjunctive* since, if indicative conditionals are also those which must conform to the constraint, those which cannot will, by definition, become counter-factuals. [18] Stalnaker's rule concerning the antecedent proves relevant to the study of counter-factual history (see sections 6 & 7 below).

The distance between the actual world, with its indicative conditionals, and the world of the subjunctive, counter-factual may be very great indeed: some philosophers therefore argue that attention should be confined to *close possible worlds*. There has been much discussion of whether *fictional modal worlds* should be regarded as theoretical or existent (Feagin 1983, Lewis 1983a). Ryan (1991) attempts to deal with this question in the literary and linguistic sphere by designating particular 'accessibility relations' and criteria for genres within thinking and narrative.

The sections which follow demonstrate how possible worlds and counter-factual thinking have been taken up by various disciplines. The implications for educational theory, pedagogy and specific subjects in the curriculum are then drawn out.

5. Possible worlds, cosmology and quantum physics

The debate among philosophers about counter-factual conditionals has direct relevance to the *transcendental realist* world which science attempts to unveil (see again chapter 3). Possible worlds theory has an important application in the explanatory physics of quantum mechanics and computing techniques (Deutsch 1997). Scientists seeking to explain the indeterminacy of particle behaviour in quantum theory have educed the notion of parallel universes to explain empirical phenomena (Deutsch 1997, Rees 1996, Wolf 1988). [19] Arguments for the existence of possible worlds and parallel universes appear to be substantiated by the findings of quantum physics particularly in relation to cosmology. Rees (1997) and Deutsch (1997), for example, describe how cosmologists, having identified a series of 'big bangs', conclude that there is a multi-universe or *multiverse* of many existing worlds. Deutsch argues that justification for such a view is based on the practical requirements and consequences of quantum computing and theory. [20]

> We exist in multiple versions, in universes called 'moments'. Each version of us is not directly aware of the others, but has evidence of their existence because physical laws link contents of different universes. It is tempting to suppose that the moment of which we are aware is the only real one, or is at least a little more real than the others. But that is just solipsism. All moments are physically real. The whole of the multi-verse is physically real. Nothing else is. (287)

The claims of main-stream quantum physicists, mathematicians and cosmologists have an interesting relationship with the philosophical standing of Lewis' work. [21] They raise the question of whether Lewis's ontological position is far stronger than philosophical sceptics, who find it 'fantastical' and a 'Jules Vernoscope', have given him credit for. The evidence from quantum physics and mathematics (Squires 1992) can also be seen as relevant to other disciplines.

However, philosophical difficulties still remain over Lewis's account. Some worlds will remain ineffable, or even completely unknowable: either because only in some universes would the fundamental physical laws be such as to permit intelligent beings, as observers, to exist (the so-called *anthropic* principle); or because the presence of a conscious observer would be required to bring a world into being (the *participative* principle) (Rees 1997: 256-7, Ferguson 1997: 74).

The problem also arises could *impossible worlds* exist? (Perszyk 1989), a question which relates to the notions of the ineffable and aporia discussed in chapters 1 and 2. What accessibility criteria should be applied to those who wish to push out the boundaries of conjectural thinking? Thinkers such as Feyerabend (1975) and Lakatos (1971), who argue within the new philosophies of science that no hypothesis can be too fanciful, implicitly adopt Lewis's view of possible worlds. But how new, fanciful or incommensurable hypotheses, particularly in science, are to be tested in relation to the rubrics of Popper or Kuhn has been extensively and inconclusively debated (Phillips 1987, Powers 1985). The problem of where 'the line is to be drawn' can be seen in the evolving response of other scientists to Sheldrake's (1988) claim for morphic resonance or Lovelock's Gaia theory (Lenton 1998). [22]

6. Hawthorn and 'plausible historical worlds'

How counter-factual thinking or possible worlds thinking might be practised in a particular discipline can be observed in the work of three historians, Hawthorn, Ferguson and Fogel. Hawthorn (1991 specifically applies the philosophical work to historical thinking about *plausible worlds*. [23] In a series of case studies, he explores how modal logic can be applied to particular historical problems along the lines proposed by Lewis or Stalnaker.

Hawthorn claims that traditional historical method has given insufficient attention to alternative historical explanation. Knowing what actors in history might alternatively have done casts important light on what they actually did do. He follows Stalnaker in asserting stringent conditions which require our staying close to the particular in practical reasoning about plausible worlds in history. The consequences we draw from these alternatives should initially fit with the other undisturbed runnings-on of that world. Neither the alternative starting points nor the running-on we impute to them should be fantastic. Hawthorn applies Stalnaker's procedure for forming counter-factuals, adding only the antecedent to one's stock of beliefs only if it is consistent with those beliefs.

> The departure from the actual present should not require us to unwind the past or appropriate the future (164-5). Start with the world as it actually was, not with fantastic settings in which Granada could have defeated Spain in 1492. (Hawthorn 1991: 158)

He cautions against counter-factual explanations where 'too much else would have had to be different', or which 'overestimate what could have been done'. [24] He advocates the comparative historical method of *contrasting actualities*, the finding of specific counter-examples to show what else could have happened; for example, how counter-measures might have been effective if most Italian town governments had followed the example of the few who defeated the plague by controlling population movement. [25] Hawthorn expresses doubts about attributing too much to alternative human agency, how individuals might otherwise have behaved as inferred from their mental states. Like Armstrong (1986), in his account of *dispositional combinatorialism*, Hawthorn sees human agents as different from other causal factors (see chapter 5). [26]

> Always ask, of any situation involving human agents, 'could these men (sic), in the circumstances in which they found themselves, with the information that was available to them, have acted other than they did?' (158)

He makes no mention of philosophical arguments offered by Quine (1990: 68) or Davidson for empathy or charitableness. The important question of whether empathy is a form of possible worlds thinking is not addressed.

Hawthorn's position is robustly anti-historicist and against 'grand theory'. He shares with Ferguson (see below) and other contemporary historians an inclination to discourage predictive or historicist claims (Evans 1997). [27] Historicist predictions have proved false that nationalism would cease to be a potent force; that the working classes under capitalism would embrace socialism; or that progressive 'secularisation' or the decline of religion would be widespread. [28] Hawthorn's arguments for the importance of historical particularity resemble the hermeneutics of MacIntyre, Nussbaum or Gadamer. However, he appears far more doubtful that historical thinking gives rise to anything which is profitably meta-cognitive, or transferably generalisable. [29]

7. Counter-factual history: the approach of Ferguson

Ferguson (1997), another counter-factual historian, at first follows Hawthorn in asserting that a notion of closeness in what is plausible, is essential in deciding 'which counter-factual to choose' in writing *virtual history*. The distinction between what did happen and what could plausibly have happened is of critical importance (84). Counter-factual plausibility is bound up with *probability* as the calculation of possibilities (85). One should therefore narrow down the alternatives to the plausible ones 'and then calculate their possibility'. Even then, only those alternatives should be explored as counter-factual history 'that contemporaries can be shown to have considered and committed to paper.'

> The most historians can do is make tentative statements about causation with reference to plausible counter-factuals (13).

Ferguson draws on *chaos theory* in explaining the unpredictable importance of individual agency or accidental events in history, although he appears not to use chaos in its scientific sense of variation which looks random but in fact is deterministic (Lorenz 1993: 8).

Historical scholarship is seen by him as an encounter with the the chaotic, since the world is not divinely ordered or governed by reason, the class struggle or deterministic law. Historians experience a *double uncertainty* like that found in quantum physics. The artefacts they treat as evidence have often survived only by chance; and by identifying a particular artefact as historical evidence, the historian immediately distorts its significance. For Ferguson the significance of chaos theory is that it can reconcile the notions of causation and contingency (79). In this respect, although he does not make the point, his account is classically existential (see chapter 8).

Ferguson attaches importance to unnoticed or undervalued antecedents; although this is not consistent with his criterion of contemporaneous awareness (suppose no-one had noticed or written down an under-valued antecedent?). He also appears to abandon the principle, laid down by Hawthorn and Stalnaker, of parsimony in antecedents; that only one antecedent should be falsified for the purposes of a counter-factual enquiry; for he is prepared to allow a syllogistic chain of antecedents under certain

circumstances. [30] Reductive explanations such as Cleopatra's nose being the downfall of Anthony, or 'for want of a nail the kingdom was lost' can thus be seen under some circumstances as serious formulations. However, he does concede the risk that playful, 'post-modern reductive inference' could result in the humorous trivialisation of historical questions. [31]

Unlike Hawthorn, Ferguson undertakes no philosophical examination of the philosophy of conditionals or possible worlds. He thus provides an illustration of the transcendental realist claim, that important, philosophical thoughts and assumptions may be embedded, un-noticed in the professional practice of a discipline (see again chapter 3).

8. Counter-intuitive, counter-factual thinking: the example of Fogel

How would one successfully apply counter-factual or possible worlds thinking in a more challenging context; say one which deals with *quantitative* evidence and where the discoveries waiting to be made are *counter-intuitive?* [32] A counter-factual approach which uses rigorous quantitative methods to explore the counter-intuitive can be found in the work of Fogel (1970), who can be seen to have undertaken 'the first serious venture into quantitative, counter-factual argumentation' (Ferguson 1997). [33] In work in the 'New Economic History' Fogel has brought about major revisions to the historical record in relation to US industrial expansion, slavery and the Civil War, immigration, urbanisation and the westward movement. [34] By exhaustively re-working economic history data he refutes conventional wisdoms such as, for example, the claims that 'railroads were the indispensable driving force behind American, domestic economic growth in the 19th century' (Fogel 1970: viii).

Fogel describes his technique as scientific as opposed to traditional history, since its hypothetico-deductive method is strongly reliant on the gathering of detailed evidence. He and his successors favour explicit, researched, analytical models over implicit assumptions and frameworks and see an important role for computing (Fackler and Rogers 1995). [35] Fogel believes that the mental model, or *thought experiment* (Sorensen 1992), for testing of a particular counter-factual proposition will be highly

technical and specific to that subject domain. His method therefore is to adopt the Bhaskarian 'conception of discovery', of assiduity in eliminating alternative plausible hypotheses, often including the most intuitively self-evident one. As McCloskey (1987: 703) observes, 'counter-factuals are a way economists speak.' [36]

The resource of computing enables Fogel to overcome the need to have a complete set of data in order to explore a particular counter-factual hypothesis in economic history. Fogel's computing methods of the 1970's interestingly pre-date the arrival of what is now known as *knowledge discovery* or *data mining* (Angoss 1996, Berry and Linoff 1997, Jeffrey 1983), an approach by which unsuspected and counter-intuitive 'effects within effects' can be automatically discovered by 'running the software'. [37] The question arises, however: how does Fogel know which 'obvious truths' to attempt to falsify? The empirical and philosophical answers which can be offered in responding to this question are set out in section 16 below.

9. Psychology and counter-factual thinking

Psychology researchers have undertaken an important range and variety of experimental studies of the perception of 'what if?' questions, the conditionals and counter-factuals of philosophical theory. Counter-factual thinking is defined by psychologists as the propensity to interpret reality by imagining *alternative event outcomes* (Byrne 1997, Roese 1997, Roese and Olson 1996, 1997). Studies of these alternative or counter-factual schema suggest that they depend on a 'mental simulation heuristic' which provides the social perceiver with a framework, which is 'necessarily relativistic', for interpreting and responding to events (Kahneman and Tversky 1982). People draw upon their considerations of what might have happened, together with their knowledge of what actually did happen, in their attempts to understand events. Bias features strongly in conditional inference of this type, with considerable implications for other specialisms such as computing, or work on mental models, as Evans et al (1995) or Schul and Goren (1997) point out.

There are generalisable features of counter-factual thinking which are protocol-governed, scripted and schematic, for the construction or generation of counter-factual alternatives does not proceed in an unconstrained manner. [38] As with counter-factual

history, estimations of probability are important. For example, normal people underestimate their personal probability of encountering negative events, such as getting cancer or having a heart attack. Contrary to conventional belief, it is well-adjusted individuals who are more susceptible to unrealistic optimism and the illusion of control concerning risk. Less well-adjusted, depressed individuals are less susceptible to these illusions. The capacity to generate counter-factual alternatives to events is affected by such factors as the time between the original event and the envisaging of a counter-factual alternative; and whether routine or exceptional circumstances precede one's thinking about the matter (Miller and McFarland 1986, Macrae 1992, Macrae et al 1993, Sanna 1996, 1997).

Thinking counter-factually about 'what otherwise might have been' often results in altered judgements of regret, happiness, blame, and causality: and it will be argued, in chapter 5, that this empirical consideration has a crucial role to play in the formation of dispositions and virtues. [39] Work on the counter-factual thinking of young children, in their perceptions of the magical, suggests that 'magic, whether sham or real, does operate as an effective tool with which to discount apparent exceptions to one's cherished beliefs' (Chandler and Lalonde 1994: 93). Children 'quarantine' their magical beliefs, being quite prepared to entertain the possibility that under special circumstances the laws of nature and conservation could be suspended.

For Byrne (1997: 220) the era of counter-factual research represents 'the coming of age of the psychology of thinking and learning'. She makes the persuasive claim that, research in counter-factual thinking may lead to a unified theory of thinking, since 'an account of the relation between cognition and emotion may emerge'. [40] A crucial connection between counter-factual thinking and the dispositions is demonstrated in chapter 5.

There are many implications if 'possible worlds' and counter-factual thinking are applied in areas related to educational theory. Traditional conceptions need to be modified concerning such topics as: narrative, imagination, the intangible, metaphor, cross-domain thinking, connectionism and computing, stochastic process, play, embodied thinking, multiple identity, and memory. Ethical, curricular and pedagogic approaches will also be affected; and it to such these matters that I now turn.

10. Narrative, fiction, and possible worlds

Ryan (1991) points out that the application of the concept of modal logic to the theory of fiction receives its earliest expression by Aristotle. For Aristotle, it is not the poet's business to tell what happened, but the kind of things that would happen - 'what is possible according to possibility and necessity' (Poetics 9, 20, quoted in Ryan 1991: 17). Philosophers of conditionals and possible worlds, literary theorists and linguisticians have taken a special interest in 'fictional modal realism'. Lewis (1983a) treats fiction as similar to counter-factual reasoning, in that the implications of one provisional supposition are followed through. A proponent of linguistic *ersatzism*, Jeffrey (1983) describes ersatz worlds as 'complete consistent novels', when such a novel:

> Describes a possible world in as much detail as is possible without exceeding the resources of the agent's language. But if talk of possible worlds seems dangerously metaphysical, we can focus attention on the novels themselves, and speak of a complete, consistent novel as actually *being* a possible world. (12)

Other philosophers draw attention to the frequency with which philosophy occurs as literature (Lawry 1980, Phillips Griffiths 1984). Literary theorists and linguists find important links between possible worlds and literary theory (Margolin 1995, Peer 1996, Pollard 1995,Tambling 1997). These embrace the theatre (Sellar 1996), theodicy in the comic novel (Robinson 1996) and even poetry (see Appendix 38).

McHale (1987) claims that the post-modern condition in poetics is quintessentially 'an anarchic landscape of worlds in the plural' (1987: 33-7). Like Pavel (1975, 1982), he has a conception of narrative domains as *ontological landscapes* which are possible worlds informed by the ideas of modal logic. For McHale this 'jigsaw of sub-universes of meaning' is remarkably similar to the theories of the social construction of reality put forward by sociologists (Winch 1958). [41]

In *Possible Worlds, Artificial Intelligence and Narrative Theory*, Ryan (1991) argues that the theory of possible worlds has two valuable concepts to offer: that of the metaphor of 'world' to describe the semantic domain projected by a text; and the concept of modality to describe and classify the various ways of existing of objects,

states and events that make up the semantic domain (3). She postulates a semantic domain consisting of a plurality of worlds; and a theory of narrative, yielding plans, plot units and story-generating programs, and built on techniques of computing and artificial intelligence. [42]

Ryan explores what is literary, fictive, or narrative, three categories which 'remain distinct, and do not presuppose each other', pointing out that other disciplines have increasingly distinguished narrativity from fictionality (1991:1-2, Appendix 32). She proposes a three-fold,'modal systems' definition of fictionality, founded upon three distinct, actual worlds: the actual world (AW), the textual actual world (TAW), and the textual reference world(TRW) (Appendix 24). [43]

Eco (1979) following Kripke (1963), stipulates that texts analysed from possible worlds perspectives must have manageable dimensions of possibility, accessibility from our own world, their starting point (200-206). [44] Put in the discourse of cosmology and quantum physics discussed earlier, such texts must be anthropic and participative. Ryan meets this requirement with a taxonomy of *accessibility criteria* (Appendix 28). [45] Her classification of narrative genres and accessibility criteria can, for instance, be applied to *The Alteration* (Amis 1976), about how life in England might have developed had the Reformation not occurred, or *Milton in America* (Ackroyd 1996) which conveys the great writer into a country he never visited. [46]

Ryan does not address the epistemological status of subject disciplines or discourses other than English studies, or the ethical and moral domain, although her emphasis on the metaphor of *world* has relevance to metaphorical moral worlds (Johnson 1993). Her analysis confirms the findings of Donald (1992 & Appendix 29) that conceptual thinking about possibility is given varying emphasis and treated differently in different subjects. [47]

11. The place of imagination

Educationists might wish to ask: What is the place of traditional notions of imagination in all this talk of possible worlds and counter-factual thinking in education? Philosophical aesthetics offers contested concepts or definitions of

imagination. [48] Scruton's (1983) claim, for example, that imagination is concerned with temporary, or 'make believe' truths, identifies it with ersatzism, the notion that imaginary worlds are in no sense real. Kearney (1988: 16) sees imagination as having four main meanings, all connected with absent objects and their capacity to seem real, through representation in material or fictional form. [49]

Warnock (1978: 202) speaks of educating imagination as part of intelligence, and how this will entail the education of the feelings. Imagination exists for the purposes of the 'application of thought or concepts to things' and is essentially rational. It proceeds from an understanding of what is the case, and involves no confounding of reality and unreality, as in delusions and hallucinations. In an important series of studies, Egan (1992, 1993, 1994, 1997) shows how imaginativeness, especially when linked with narrative and story-telling, can be stimulated in children.

Discussion of the status of 'ersatz' possible worlds seems analogous, therefore, to debate about the nature of imagination, and whether literary characters can be said to have real existence (Radford 1975, Bricker 1987). [50] Taking Lewis's position, that fiction is similar to counter-factual reasoning, it is easy to see that a character such as Anna Karenina, in the possible world context of a great work of fiction, has a compelling, imaginative existence. We are deeply affected by Karenina's tragic experiences. She is more real than many other people we know (Radford 1975) and should not be seen as 'theoretical' (Feagin 1993). However, this may be different from seeing her as a real person with her own historicity, claim others (Scruton 1974, 1983, Boruah 1988). Rosen (1993) offers a fictionalist interpretation of possible worlds discourse which seeks imaginative benefits without incurring the ontological cost of commitment to the existence of non-actual things (Divers 1994, 1995). [51]

Some influential accounts of imagination which favour a coherence, or ersatzist epistemology, are therefore opposed to Lewis, who gives a correspondence account for imagined, possible worlds. His position resembles in some ways the mentalism of Collingwood (1938: 285) who held that art proper is not an artefact or a perceptible thing, but rather solely something that exists in the artist's mind. Related to this point, Gottesman (1997) makes the interesting observation that possible worlds which are utterly believable are found in the case of successful propaganda scenarios. This issue is explored in depth by Proud (1997) in relation to children, narrative themes and the politicisation of the fairy tale. [52]

A possible worlds account of thinking would therefore involve a more prominent place for the examination of indiscernible, including propaganda worlds than is at present seen in critical thinking texts (Groake et al 1997: 13-14). Such topics would be addressed from a firmer philosophical foundation than hitherto.

12. Intangible worlds

That possible worlds may be indiscernible, intangible or transcendental is reflected in *folk psychology* accounts of the nature of belief (Churchland 1994). In particular, worlds which are apprehended as *ineffable* or *aporetic* could be seen as what some philosophers characterise as *impossible worlds* (Naylor 1986). Indiscernible or intangible possible worlds have great practical importance at times. Medway (1997) points out how intangible architecture, the 'unbuilt buildings' of famous and innovative architects, have often been more influential than what has been built. [53] Architecture and town planning have been much concerned with utopian possible worlds which appear as *manifestoes of intent* (Tafuri 1996). On the other hand, tangible referents can also be aesthetically important. For example, the inferred possible world of *the institutional theory of art* rests heavily on tangible objects and social practices (Danto 1981, Dickie 1984, Wollheim 1980b). [54]

How spatial counter-factual and possible worlds can permeate the culture of a subject discipline, transcendentally but inexplicitly, can be seen in the case of geography education. Geographers do not draw on the philosophical work on possible worlds, yet their subject is fecund with philosophical, especially phenomenological notions of domains and worlds. The best-known of these, the concept of *mental maps* (Agnew et al 1996, Gregory et al 1994, Johnston et al 1994), was described in chapter 3. An inventory of possible worlds discernible in the current discourse of geographers would also include: *imagined communities* (Anderson 1983); *rhetorical cartography* and *hyperspace*, as 'a domain in which local experience no longer coincides with the place in which it takes place' (Jameson 1991, McDowell 1994: 165), and its architectural manifestations which are 'not spatially located or fixed'(159); the *world as exhibition* (Gregory 1994: 84); the *taken for granted or life world* of humanistic geography (Ley 1977: 498-512; Johnston et al 1994: 616); topophilia and *fields of care* (Tuan 1974,

1996); *anticipatory utopias* (Benhabib 1987); the *concept city* (De Certeau 1984); *life-worlds, Lebenswelt* and *genre de vie* in Vidalian geography (Johnston et al 1994: 216); and *orientialism* (Said 1996). Spatial conceptions predominate in all this, as in memory theory, but *time-geography* and *stochastic simulation* (Johnston et al 1994: 594; Agnew et al 1996: 636) also reflect temporal modal thinking in the subject. [55]

Similar curriculum evidence of intangible worlds can be found in English studies and literary theory. The technique of *deconstruction* (Derrida 1976), encourages the playful search for counter-factual, indiscernible worlds. Unspoken or unformulated propositions, gaps, supplements, and subtle internal self-contradictions show a text to be saying something quite other than what it appears to be saying. A new text thus gradually begins to emerge subtly at variance with itself, and the deconstruction continues as a stochastic sequence of dialectical readings (see below). The reader must exegetically pursue all of the possible worlds of meaning in a text. [56] There is a emphasis on the ludic and the playful, as in Derrida's notion of the 'puncept' or conceptual pun (Mautner 1996: 459). A pedagogic example of 'playfulness' and tentativeness in the deconstruction of texts by children is found in Goodman's (1972) account of the reading process: he sees it as a *psycho-linguistic guessing game* in which the child decodes a text in a series of attempts, using the context to puzzle out likely meanings.

The extent to which intangible worlds pervade popular culture can be seen in the theory of the the marketing of goods and services. According to Cowell (1990: 48) and Shostak (1977) the concept of *intangibility* is fundamental to the conceptual framework of professional services marketing (Appendix 37). Marketing discourse uses the vocabulary of ontological scholasticism, of entities, attributes, elements and intangibles, to construct its consumer possible worlds. [57]

13. The importance of metaphor

Ryan (1991) considers that the use and exploitation of *metaphor* is central to the concept of modal realism about possible worlds. She is puzzled that metaphor, along with tropes in general, has never been openly regarded as fiction, since metaphorical expression is clearly a kind of possible world creating activity.

Discussion of metaphor, analogy and models has been extensively carried on by philosophers of science. Rorty (1979), Cooper (1986) and others have traced the way in which all science is the literalisation of metaphor, when philosophers can easily become captive to metaphors, such as that which suggests philosophy is 'the mirror of nature'. Metaphor is seen as central to the way that scientists think (Sutton 1992). Mashhadi (1997b) points out how quantum physicists have created a language in which the fundamentals of the world can no longer directly be observed, and how metaphor and figurative thinking are now inherent in the nature of the subject.

Philosophers see metaphor as a challenging philosophical problem and their accounts of what it is vary. Quine (1978: 60) defines metaphor in terms of childhood development, as a series of 'playful exegeses in personal growth'. [58] His view is that the originating, first metaphor is always innovative and fresh but that its impact, following what Scheffler (1991) would call the cognitive emotion of 'intellectual surprise', tapers off into ordinary, non-emotivist usage. For Swanson (in Sachs 1996: 163) also, the emphasis is on metaphor as innovative, conjectural and playful. A metaphor works as an erroneous conjecture, 'a peremptory invitation to discovery' conflicting with our expectations. [59] Does a metaphor both have a life of its own and also stand in a surrogate relationship to something else? Wittgenstein (1958) argues in the *Philosophical Investigations* that 'we speak of understanding a sentence in the sense in which it can be replaced by another which says the same, but also in the sense in which it cannot be replaced by any other' (81). Davidson (1978) takes the view that there is a central mistake in the idea that a metaphor has, in addition to its literal sense or meaning, another sense or meaning. [60]

The linguist, Lakoff (1993: 203), argues that locus of metaphor is not in language at all, but rather in the way one mental domain is conceptualised in terms of another. Thus *metaphor* is cross-domain thinking, while *metonymy* is a trope in which a part stands for the whole, while operating in one domain only. Lakoff sees mental life as being founded on underlying, archetypal 'conventional' metaphors, or 'mappings across conceptual domains' (Lakoff and Johnson 1980: 245). [61] This formulation accords with the philosophical analysis offered by Hintikka (1990), who speaks of *meaning lines* drawn using ideas of *similarity* and *continuity* and connecting different possible worlds. Meaning lines in metaphor have to be anchored in one world of

literal reference, while another is mentioned which need not be the *actual* world. Hence metaphor is not a matter of truth or of a special kind of language act.

Ryan (1991) in fact concludes that metaphor does not involve relocation to a new system of reality, since any meaning that originates in the metaphor world is reflected back towards the Actual World; and that, therefore, 'this return to the Actual World excludes metaphor from the realm of fiction' (Ryan 1991: 82, Appendix 32). This position is puzzling, since extended metaphorical narratives especially those with complex systems of thought, such as the utopian novel, allegory or fantasy, have an exiguous relationship to the Actual World. We enter them for some considerable time, and they continue to exist fictionally in our minds in their own right. [62]

Nussbaum's (1986, 1990) hermeneutic account of the Greek morality and drama depicts the play as a form of metaphorical statement whose primary message cannot be experienced in any other way. Fox (1990) makes metaphor central to her account of how children's thinking develops from its origins in narrative (see Appendix 16). But it is Ryan (1991, 1995abc, 1996, 1997) who offers the most coherent taxonomy for the place of metaphor in thinking about possibility.

14. Cross-domain thinking

Cross-domain thinking has been central to ideas of the metaphorical exploration of possible worlds, but those concerned with the theories of multiple intelligence have also taken a particular interest in its relationship with creativity (Perkins 1984, Sternberg 1988b). It has an important link with theories of humour (Koestler 1964).

Conjectural thinking involves cross-domain and cross-intelligence thinking according to some writers. Kornahaber and Gardner (1991: 161) claim to identify various thinkers who 'working across their multiple intelligences' have come up with innovative thinking in science concerning dinosaurs, or empathetic writing in history. [63] Innovative individuals contribute to the changing the definition of genres as, say, in the case of the appearance of the 'psychological western'. Gardner (1995) follows Kuhn (1970) in acknowledging the importance of incommensurability and 'paradigm shift' in this process:

> Indeed the individuals we consider the most creative actually change the nature of the domain. (Gardner 15) [64]

Bresson (1991) claims that transfers between specific kinds of intelligence result when relationships established in various fields are analysed in 'an abstractive system'. A new kind of knowledge may arise, as when Pauling crossed sub-disciplines in science in his discovery that sickle cell anaemia was a 'molecular' disease (Hager 1995). [65] However, Bresson believes that it is not possible to teach creative thinking, since there is no certainty that transfer will occur even when the processes gone through are identical. [66] Others claim that a modest capacity for flexible, cross-domain thinking can be taught, by employing 'transferring' skills and good subject knowledge (Bailin 1994, Bridges 1994, 1996).

15. Connectionism and computing

Various conceptions of worlds, as models, domains, schema, frames, micro-worlds and so forth, have special importance in *connectionist* accounts of computing theory and human learning (Eysenck and Keane 1997: 249). The links between creativity, artificial intelligence and computing are stressed by Boden (1992: 129) who sees the brain as a 'workshop of the possible' and envisages that connectionist research, although in its infancy, will provide important break-throughs (131). Caillot (1991) stresses the possibilist uses of computing which can put students in situations which launch them on a process of exploration with minimal guidance.

> The interesting fact about microworlds is that exploration can lead directly to model building and it reflects that constructivist view that; 'We understand the world we live in by building up mental pictures for ourselves.' (98)

A similar claim for microworlds as a form of connectionist 'mental modelling' is advanced by Papert (1980). [67] MacClure (1991) and Caillot (1991: 95-101) specifically identify the area of information technology as offering an exemplification of the 'infusion' approach to the teaching of thinking. There are also close links

between connnectionist computing and *stochastic process*, as will now be demonstrated.

16. Stochastic thought

The question was raised earlier, in relation to Fogel's work, of how a successful counter-intuitive conditional hypothesis, challenging an established and 'self-evident' fact, gets to be chosen from what appear to be innumerable options. The role of *stochastic process* and *thinking*, it can be argued, is central to what is going on.

Stochastic process is a mathematic-statistical model describing sequences of outcomes. It occurs especially where there is thought to be a random element - one which usually is found to subsume a large number of (often minor) causal influences - 'the net effect of which is a quasi-random disturbance of outcomes' (Johnston et al 1994: 594). 'Random' in such accounts has a technical meaning contrary to normal usage, namely that a result is expected in which a pattern, or logical form or order will be discovered. If the probability of being in a state at a particular time is wholly dependent upon the states at some previous time(s) it is said to be a *Markov process*, and can be represented by a *transition probability matrix*.

Stochastic thinking will not be confined to one or two subjects in the curriculum which deal with complex probability theory, chaos theory and calculations as does mathematics (Hoel et al 1972). It is applied in virtual history as has been described, in the geography of land-use (Collins et al 1974), in physical education, science, geography and economics. The specialised form of the stochastic known as Markov process is required by all subjects in the curriculum which, like music, involve improvisation or creativity in responding to a developing scenario (Budd 1985). [68] Its manifestation is especially clearly seen in musical thinking. Budd draws heavily on the stochastic concept from Meyer (1956, 1969) in his philosophical analysis of musicological theory.

> In the first place, a musical work is not only a stochastic process - a system that produces a sequence of elements according to certain probabilities - it is a Markoff process - a stochastic process in which the probabilities depend upon the previous elements. (68)

The connectionist psychologists, Garnham and Oakhill (1994: 251) and Johnson-Laird (1986, 1988, 1993), give a similar account of stochastic expertise and creativity within the jazz field. Berliner (1995), in his epistemological study of the thinking of jazz musicians, claims jazz improvisation to be the complex, musicological equivalent of canonical, improvised oral story-telling (see chapter 5). [69]

17. Play

A further aspect of the stochastic concerns *wit* and *ready-wittedness*, which can be viewed as specialised forms of stochastic improvisation, similar to play, for construing cross-domain, possible worlds (Koestler 1964, Thornbury 1998). [70] 'Ready-wittedness' is regarded by Aristotle as an important disposition within the virtues of social intercourse (Aristotle, Nicomachean Ethics: 103).

Wit has similarities with play as defined by Huizinga (1995) in the worlds it explores: play is not ordinary or real life. It is a free activity standing outside of ordinary life, in which a distinctive order reigns. Such post-modern notions of play and improvisation, Gallagher (1992: 47) argues, are essential to hermeneutic activity in the educational process. Play is what allows the student to undertake self-narrative, in the Gadamerian sense of relinquishing old meaning and capturing new meaning. The pedagogical importance of play is that 'it bestows reality on the unreal and gives weight to that which is possible or fanciful'. The post-modernist emphasis on 'intertextuality' and 'bricolage' fits such a model of stochastic improvisation and play.

Damasio (1994) identifies the stochastic neurological mechanism which undertakes the 'winnowing of a large mass of possible structures to leave the one best conjecture'. In *Descartes' Error,* he shows how an emotional response, the 'somatic marker', is learned unconsciously which enables subjects to direct their choices consciously and correctly. [71] The critical relevance of wit to notions of causal disposition and virtue ethics will be discussed in chapter 5. [72] However, from these and other sources we can derive an account of how stochastic and possible worlds thinking might inter-act in the classroom.

18. Embodied thinking

Are the possible worlds of philosophical thinking and sensibility restricted to language and speech? Pinker (1994) argues, in *The Language Instinct*, that thinking is largely free of linguistic constraints; it may take place in other ways than language, and it is not necessary for people to use a particular language in order to think. Damasio's (1997) empirical finding, that the basic neural device which instantiates the sense of a thinking self does not require language, is similar:

> The meta-self I envision is purely non-verbal.....Humans have available second order narrative capacities, provided by language, which can engender verbal narratives out of non-verbal ones. (243)

Damasio attacks what he characterises as the Cartesian error; the assumption of a disembodied mind, *res cogitans* or the thinking thing, as an activity separate from the non-thinking body. [73] He points out that in *anosognosic* patients, who are unable to acknowledge their disease as the result of an inability to sense physical defect after a stroke, there is no evidence of emotion and feeling (62-9). Damasio thus moves a philosophical debate forward onto more secure empirical ground, supportive of previous inter-disciplinary attempts at *Explaining Emotions* (Rorty 1980).

A related empirical area, bearing on the body-self question in philosophy, concerns the possibility of the transfer of thought (and emotion) through *synaesthesia* (Baron-Cohen and Harrison 1997, Cytowic 1995, Gardner 1993). Cytowic (1995) shows empirically how both cognition and affect can be translated into other sensory modalities. His explanation for this is that researchers have in the past placed too little emphasis on the contribution of the limbic or 'emotional' brain. [74] For example, the virtuoso thinker and physicist Feynman relied on synaesthetic 'thinking' for some of his most complex, creative insights (Gleick 1992). The neuro-biological and psychological evidence (Clark 1997, Cytowic 1995), taken with the arguments of phenomenological philosophers, can be developed to support the case for thinking of the person as a body-self concerned with the 'felt meaning of the world' and a 'metaphysics of feeling (Wilshire 1991: 237-244).

Bryan and Assiter (1993) argue a similar philosophical case that in the 17th and 18th century 'physical education' became devalued. Enlightenment commitment to universal, context independent knowledge and reasons elevated the mind over the body (25). They urge that this inbalance should be redressed in the approach to thinking in education. Forms of philosophical and other thinking should take place in 'Aristotelian dress' in which 'the knower is transformed in the process of gaining knowledge in the way that a craft worker is changed as he gains understanding and skill in the practice of his craft' (39).

The argument that philosophical and transferable thinking involves the full physical person and self is further argued by Dreyfus (1995), Macann (1993) and Clark (1997), in relation to the ontology of Merleau-Ponty (1962). [75] Merleau-Ponty proposes that synthaesthesia is the central device in the shaping of the body-self as a person.

> Since the body is a unity, each of the senses operates as a unity, unifying the world in its own distinctive fashion. More, beneath the discrimination of the several worlds opened by the different senses we find an intersensory unity, a *synaesthesia* which is the sensory counterpart of the synthesis of the body. (quoted in Macann 1993: 182) [76]

Mclaren (1986, 1989, 1996) makes the educational case that thought is conveyed through the preoccupation with the body-self, ritual performance, symbols and gesture found in the 'political economy' of student, youth and school cultures. Egan (1997: 5) asserts that of the five core aspects of children's educational development asserts: 'our body is the most fundamental mediating tool that shapes our understanding.' [77]

19. Multiple identity

Can possible worlds and counter-factual thinking occur in the form of more than one identity or intelligence? Conceptions of multiple intelligence, multi sensory and synaesthetic 'thinking' may be linked with the phenomenon of multiple personality or identity. Empathetic ubiquity in conjuring up counter-factual identity can be seen as the obverse side to the pathological forms of depression, depersonalisation, and dissociative identity disorder recognised in abnormal psychiatry.

This can best be seen through a literary example. Fernando Pessoa (1974, 1992), a major Portuguese poet and novelist of the twentieth century now seen as the successor to Camoes, wrote poems under four names and different identities. Pessoa's novel *The Book of Disquiet* exemplifies the theme of metaphysical ubiquity in authorship based on positive moods of the depersonalisation of self and empathy with characters (Pontiero 1992). [78] Pessoa's oeuvre exemplifies, in literary practice, what philosophers of possible worlds Parfit (1988) and Kaplan (1979) describe as 'trans-world heir lines', and computing theorists as 'ubiquitous tele-embodiment' (Paulos and Canny 1997). It is the affirmative aspect of the depersonalisation suffered by Mill (see chapter 8); and at a higher level of afflatus it may appear as mystical apprehension and writing along Blakean lines. It may also manifest as an unacceptable denial of responsibility for the deconstructed, multiple self (see section 21 below).

Further neurological and psychological research into multiple intelligence, synaesthesia, and multiple personality, may provide philosophical possible worlds with an increasingly firm, empirical foundation. Such developments as those already described do however, underline the argument of Dennett (1996: 148), cited in chapter 1, that philosophers need to take much more interest in empirical links between the philosophy of identity and the findings of neuro-science. [79]

Post-modernist and feminist claims for a different way of exploring identity through the possible worlds of computing in 'hyperspace' are advanced by Turkle (1996), Harraway (1991), and Plant (1997). Turkle, in her dual role as a practicing psycho-analyst and Professor of the Sociology of Science at MIT, approves the fact that multiple, possible worlds of identity are now available through the medium of the Web, as a 'parallel world'(45). She claims that 'raptures of multiplicitous being' and multiple identity can be achieved through computing on the multi-user domains (MUDS) of the World-Wide Web (257). This phenomenon in literature and computing is described by Ryan (1995a, 1995b, 1997) as the post-modernist 'doctrine of pan-fictionality'. [80] However, the computing perspectives display an important shortcoming - in that they do not address the important question of how the Aristotelian and neuroscientific requirements for embodiment are to be met.

20. Memory as previous knowledge

Memory as a form of possible world has a very important part to play in conceptions of continuous personal identity, multiple selves and narrative. Notions of conditional, counter-factual or possible worlds are especially evident in medieval theories of mind and memory drawn from Platonic and Neo-Platonic philosophy. The 'art of memory' is uniquely dependent on the manufacture of interior possible worlds, which are spatially conceived as Yates (1966) shows in her portrayal of medieval memory systems. Bloom (1994) argues that a literary canon, the remembering and ordering of a lifetime's reading, is a form of memory 'theatre' system. [81]

Research in psychological and reading development demonstrates that memory and previous knowledge are crucial in the making of inferences (Casteel and Simpson 1991, Fincher-Kiefer 1992). The presence of remembered facts and previous knowledge recalled from another subject area, is crucial for creative cross-domain thinking, as Hager (1995) shows for the case of Linus Pauling. Neisser (1989) identifies the narrative importance of memory in creating autobiographical worlds.

Hacking (1995), in a philosophical analysis of multiple personality and dissociative identity disorder, argues that there is a sense in which the past can be changed by new interpretations of it: and so there can be *truths about the past which were not true in the past* (249). [82] If Hacking is correct, memory is more central to epistemic counter-factual thinking and the formation of ethical dispositions than has been traditionally thought. The role of *recovered memory*, in restoring past worlds or constructing new worlds from them, emerges as a significantly ambiguous form of conditional thinking in this context (Garry et al 1996). Luria (1987) also shows, in his study of a synaesthetic mnemonist, how cross-sensory interference or the inability to forget or to organise one's memory, can create the severest personal difficulties. Memory needs to be given more careful attention in relation to possible worlds and counter-factual thinking than has so far been the case.

21. Ethical pitfalls

There are pitfalls for educators and philosophers, in uncritical acceptance of talk about possible worlds, multiple being and memory, previous knowledge and identity. The case can certainly be made out that the pathological model of multiple personality, of dissociative identity disorder has been too prominent, and that normal people should regard themselves as having 'draft identities'- in a phrase of Dennett's (1996). However, the relativistic weakening of notions of personal identity, in favour of multi-identity accounts, may be unhelpful in the educational setting. There is a danger that a young child's grasp of reality, of jurisprudential, ethical or moral accountability, could be weakened by a pedagogic style which takes such a relativist viewpoint (Davison and Neale 1996: 184-5). [83]

Evans (1997) points up this problem in relation to the study of history. An over-commitment of receptivity to 'multiple voices' in post-modern history, Evans points out, could result in a vulnerability to hoax and propaganda claims such as an *alternative history* of Holocaust denial (291-3). While welcoming the extension of historical technique, Evans sees epistemological dangers which can arise from acquiescence in the notion of self as multiple identity. Paul de Man's exposure as a Nazi sympathiser raises the issue in an acute form. De Man invoked a post-modern 'deconstructionist' truth claim to justify his former identity as a war-time collaborationist :

> 'And it is never possible to decide which of the two possibilities is the right one. The indecision makes it possible to excuse the bleakest of crimes because, as a fiction, it escapes from the constraints of guilt and innocence. The experience always exists simultaneously as fictional discourse and empirical event' (De man quoted in Evans 234). [84]

A pressing and difficult question for educators, therefore, will concern guide-rules for approaching the 'wilder shores' of conjecture or discourse in teaching a particular school subject. How is *possibilism* to be translated into pedagogy while avoiding the encouragement of febrile, 'inauthentic' or relativistic speculation? Are elegance and rhetoric, as in the case of Baroque or Rococo art, to be valued as much in aesthetic possible worlds as conciseness and brevity? The potential for being facile or over-elaborate, cannot be disarmed by simply adducing the principle of Occam's Razor, as

Forrest (1982: 456-464) argues. For if, as can be shown, this actual world contains 'redundancy', so therefore must the many other possible worlds.

The chapter concludes by discussing the pedagogic and curricular implications of implementing an approach which lays stress on possibilistic thinking within a philosophy and pre-philosophical curriculum.

22. Implications for the philosophy and pre-philosophical curriculum

What are the implications for those devising and teaching a *philosophy and pre-philosophical curriculum*? Possible worlds and counter-factual thinking have proved highly relevant to the curriculum and pedagogy of philosophy teaching at the university level (Appendix 30). In *Possible Worlds*, Bradley and Swartz (1979) show how some philosophical problems can, uniquely, be solved by the application of the possible worlds approach. For example they offer a proof using modal logic to solve the traditional problem of whether justified belief in a true proposition constitutes knowledge (Appendix 3).

Edgington (in Thornbury 1997a) takes the view that this type of heuristic is of central importance in philosophical pedagogy, and relevant to all pedagogy. However, while its presence can be seen in science, mathematics, history and philosophy teaching at the university level, philosophical work on conditionals and possible worlds has not yet influenced work in schools and colleges. Examination of the standard critical thinking texts for schools and colleges reveals only rare and cursory mention of counter-factuals (Hughes 1996). There is considerable scope for a shift in professional practice.

There are particular implications to be drawn out for the approach to the pre-philosophical curriculum in a school or college. [85] As Gilbert and Swift (1985: 681-696) argue, any complex, coherent and self-consistent set of beliefs and classroom practices will require considerable attention to *alternative conceptions*. So that while a canonical approach to pedagogy will be advocated (see chapter 6), it will need to be based on the flexible, 'provisional dogmas' of transcendental realism (see chapter 3).

Conjecture can be linked with the classroom notions of imagination or inventiveness, and contingent post-formal thinking involving metaphor, playfulness and irony. [86] It will generate a new view of creativity. [87] Traditional accounts of memory will be amended. [88]

Using modal realism as an underpinning for a pedagogic model allows an improved philosophical explanation of the role of play in education. The role of play or playfulness, speculation, and whimsy in formulating possible worlds of modal logic and imagination can be seen as closely similar to the 'play' of child development theory. [89] Post-modern 'playfulness' in stochastic thinking will be as important in the secondary school or college as in the primary classroom, where it is presumed to occur 'naturally'. Kincheloe and Sternberg (1993) argue for a teaching disposition in which such 'playful' post-formal thinking features prominently. [90]

Some curriculum theory and research has begun to attend to this need. Marton (1992), in transferring his phenomenographic method to English studies, found 'reflective variation' and 'elaborative' variations developing as ways of understanding a Kafka parable. Brezina (1996) uses counter-factual thinking in teaching Rawlsian and other notions of equality as a sociological topic. A pedagogy for history teaching offered by Leinhardt (1995) is discussed in chapter 8, in which post-modern tentativeness, ludic uncertainty, and ostensive definition are empirically combined. [91]

Implications arise for subject teachers when possibilist thinking is given more prominence. The ground rules for thinking counter-factually are set by the professionality, social practices, intellectual traditions and forms of knowledge of individual subject disciplines. The refining of one's approach to possible worlds, 'stochastic', hypothetical and conjectural thinking is therefore most likely to be worked out within the social and professional practices of a particular subject tradition, as argued in their different ways by Hirst (1993), Kuhn (1970), Nussbaum (1990), MacIntyre (1981) and Rorty et al (1984).

All curriculum subjects will need to be rigorous and systematic in their approach to the genres of thinking or discourse in the subject specialism; and especially in encouraging speculation about, or in confronting the ineffable and intractable. For example, aesthetic aspects of the art curriculum involving conditionals will, for instance, be emphasised (see chapter 5). [92] Talk among children, in science lessons about the

possible worlds envisaged in cosmology or uncovered by nano-technologies, in geography about the 'provisionality of explanation', or in health education about personal identity, will all be encouraged (see chapter 6).

Different emphases will arise, however, in different subject areas in a possible worlds approach to constructivist practice and pedagogy. The 'strong version' will be more phenomenographic and incline to prescription in the form of 'right next steps' or answers. It would pertain to topics where progression in children's understanding has already been well-documented and shown, subject to individual variations in 'cognitive' or learning style, to follow a universal pattern. Midway would come subjects like history where fairly stringent guidelines for possibilist and other thinking in the subject area are laid down through canonical procedures - for example, following the 'rules' for historical speculation set out by Hawthorn. Guidelines for values education in the dispositions, for example, might emphasise more the possibility of transformative, utopian change in societies (Morton 1969, Rees 1996). [93] The teacher will often deal with both phenomenographically finite solutions, and textual deconstruction justifying a plurality of response, in the same lesson. Children will be encouraged both to generate their own 'spontaneous' conjectures *and* to apply phenomenographic rules as it were. The two approaches are not incompatible but complementary. [94] Science education, for instance, contrary to popular expectation, abounds with dilemma and uncertainty (Fensham 1988).

Pedagogic practice will reflect the notion that personal identity is realised through the body-self; synaesthetically, through multiple intelligence, and the exercise of 'cognitive emotions' such as empathy. The concept of the embodied mind entails a more important place for the arts subjects, technology and physical education and sport (Hyland 1990, 1998, Weiss 1969,Varela et al 1991). The *nativist* perspective on body-self in psychology (Donald 1991, Ohman 1997: 253), in which certain concepts are thought to be modally and genetically endogenous, as in the case of speech or parenting, will affect the approach to personal and social education.

Any assumption that subjects are divided into two domains, cognitive subjects and affective subjects, should be eschewed. Bruner (1986) is mistaken about there being two different ways of approaching reality: the scientific responding to thinking about cause and effect, and the literary which is concerned with making 'possible worlds' (see chapter 3). All subject study will involve cognitive and affective counter-factual

thinking, and the dispositions (see chapter 5). A subject specialist and a cross-curricular strategy will be required (see chapter 6).

23. Curriculum resources

There are considerable implications for the type of curriculum resources which are used if a more possibilistic teaching approach is introduced. Teachers and lecturers will need draw up guidelines as to how speculation concerning possibilia is to proceed in the study of their specialism, its forms of internal discourse and genres (see chapter 7). Such curriculum resources will include examination syllabuses, intervention materials and classroom texts, together with sources from the general and popular culture. This will involve re-appraisal of curriculum and departmental documents, and of one's pedagogic and subject stance and the type of teaching resource which is chosen (chapter 7). [95] For example, Seier's (1994) argument that young children's syllogistic reasoning is superior when undertaken in the context of a 'fantasy' text supports those who like Egan (1994), Lowe (1994), Matthews (1978, 1980), Murris (1992) or Nussbaum (1990, 1994), favour the use of 'real books' in approaching philosophical topics.

The Appendices to this study have been designed as resources in philosophical and pedagogic thinking which help in such a review process. Hawthorn's (1991) approach is, for example compatible with the Cambridge History Pilot Scheme (1992) 'assessment domains' (Appendix 14). Shemilt's (1998) schema for empathetic thinking sets counter-factual criteria (Appendix 21). Newmann's (1990) account of 'classroom thoughtfulness' will encourage counter-factual thinking in the form of 'original and unconventional ideas, explanations and hypotheses' in social studies (see Appendix 10). Berrill has a special place for the hypothetical in her typology for the assessment of thought in written English (Appendix 8). [96] 'Alternative theories' and 'frameworks' in generating hypotheses in science and technology teaching feature in the social constructivism of Driver (1983, Appendix 13).

Curriculum resources for the younger children in particular should be multi-sensory. As Murris (1993c and 1993d) shows, the visual presentation of fictional stories stimulates imaginative philosophical apprehension in young children. [97] Any

approach should draw from a variety of media. However, it should be borne in mind that the selection and design of curriculum materials for the teaching of philosophical thinking introduces a new dimension into curriculum theory and studies. It is likely to require much work and cannot be lightly undertaken (see chapters 6-8). [98]

24. Valued possibilities

The importance of a metaphysic of possibility for educators reflects not just the ideas of philosophers working in the field of conditionals, but also the transcendental realism of Bhaskar (chapter 3), and the praxis of many teachers. Ontologically, it resonates with Sartre's notion of personal 'becoming' and 'facticity'; and with Heidegger's central theses in *Being and Time*. [99] As Kekes claims: 'the greater the plurality of valued possibilities, the better it is for us', since their pursuit will be linked with the value of traditions and the good lives we may live by adhering to them (1993: 29). 'Wittgenstein's mistake' of not entertaining a sufficient plurality of possible worlds can thus be avoided. The *ethical* aspects of dispositional possibility will then emerge as having great importance. It is that implication which is pursued in the chapter which follows.

Notes to chapter 4

1 The term *stochastic* is used by various thinkers discussed in this study, among them being Budd (1985), Fogel (1970, 1983), Ferguson (1997), Hager (1995), Hoel et al (1972) and Pool (1996). Usage varies. Fogel, for example, uses the notion metaphorically as simple 'randomness'. Technically, there are two types of stochastic process which arise in mathematics, computing, economics, geography, musicology, and other domains. These are the *Bernoulli sequence*, a sequence of trials in which all trials are probabilistic and independent of one another, and the *Markov process*, when the probabilities for a trial may depend conditionally on the outcome of the previous trial. Techniques of 'fuzzy logic' (Kosko 1994) may be required to deal with such data. Conjecture in mathematics is a formal technique involving thought within a deductive system (Honderich 1995: 852).

2 There are numerous instances among recent films and literary fiction, for instance the films *Jurassic Park* (the return of pre-historic animals) and *Groundhog Day* (in which the same day keeps repeating itself). See Nixon and Logue (1994) *History in Action: Hypotheticals* for an example of a school television History Programme; and *Hypotheticals* (Millson 1994) for a transcript of an adult TV broadcast 'hypothetical' on medical ethics.

3 In an interview with David Benedict (1996) Jonathan Miller observes: 'I've always felt there is something deeply serious about playfulness. Science itself has a ludic element. You are tinkering around, setting up hypotheses..Science and theatre are both what you would call counter-factual enterprises. What you do is set up a hypothetical situation and say: what would it be like if this, that or the other were the case?' An early literary provenance is found in Edgar Allan Poe, and a scientific one in the work of Giordano Bruno.

4 Clark (1995: 200-11) provides a valuable classified bibliography separately listing science, poetry and philosophical works. Ayckbourn has written plays with branching plots featuring a different ending according to the day of performance. Dramatists and performers discussed by Counsell (1996) reflect such 'possible worlds' topics as the breaking of the empathic link between actor and spectator through distanciation or alienation, the use of two contradictory discourses in Brecht (102-5); the question of a universal language in Brook's *Orghast* (156-7); the notion of a timeless world in Robert Wilson's *Theatre of Visions* (187-196); serial discontinuity of identity in Beckett (127); and 'random' performance art (220-22).

5 Dudman in Jackson ed. (1991: 204). Work of an empirical nature on counter-factuals has also been undertaken on an increasing scale, and reported in a growing literature by cognitive psychologists. One can also link the idea of thinking modally with new psychological theories, such as that of Gardner (1993) that intelligence appears in different forms, sites or sensory modalities. This study argues for the application of advances in this philosophical specialism to the broader sphere of *philosophy and the pre-philosophical curriculum.*

6 This is significant change in 'philosophical style', the notion portrayed by Lang (1990). I am grateful to John Divers, of the Philosophy Department, University of Leeds, for a picture of the social movement and intellectual aspects of this renascent scholasticism. Curiously, the contribution of Catholic philosophers is not dominant as might have been expected.

7 Edgington's (1995: 235-331) State of the Art review, On Conditionals, is comprehensive. See also O'Leary-Hawthorne (1996).

8 A positive feature of this account is said to be that it explains why we count someone who asserts that if A then B as disagreeing with someone who asserts that if A not B. For we can say that, if the conditional probability of B given A is one minus the conditional probability of not B given A, it means that 'if A then B' is highly assertable if and only if 'if A then not-B' is less assertable.

9 Some other philosophers and critics, such as Naylor (1986) and Perszyk (1989) claim that Lewis's argument could apply equally to 'impossible worlds'.

10 'The worlds are something like remote planets; except that most of them are much bigger than mere planets. They are not remote; neither are they nearby...They are not at any spatial distance whatever from here. They are not far in the past or future, nor for that matter near; they are not at any temporal distance whatever from now' (22). Lewis goes on to claim that these worlds are isolated; there are no spatio-temporal relations at all between things that belong to different worlds. Nor does anything that happens at one world cause anything to happen at another. 'They do not overlap, having no parts in common, with the exception, perhaps, of immanent universals exercising their characteristic privilege of repeated occurrence' (22).

11 Maudlin (1996: 669-682) argues that Lewis's conception of possible worlds as concrete particulars isolated by lack of spatio-temporal connectedness cannot be maintained. No matter how many copies of such indiscernible worlds there are, there could be more, a possibility which Lewis's theory cannot represent.

12 See Lewis (1986: 136).

13 Lewis points out that in the last two decades philosophers have offered a great many more analyses that make reference to possible worlds, or to possible individuals that inhabit possible worlds: 'I think it is clear that talk of possibilia has clarified questions in many parts of the philosophy of logic, of mind, of language, and of science - not to mention metaphysics itself. Just as the realm of sets is for mathematicians, so logical space is a paradise...I would wish to argue, for philosophers' (Lewis 1986: 3).

14 The pedagogic response to this question is a critical matter in relation to the *philosophy and pre-philosophical curriculum:* both for the primary teacher, in relation to young children's approach to logical thinking, and for the specialist subject teacher in defining the ground-rules for thinking in a particular subject or discourse.

15 Many thinkers have identified probabilities through a stochastic process which may be unconscious and intuitive. Poincare, for instance, dreamt solutions in mathematics after drinking coffee. Damasio (1994: 188-189) offers a neurological explanation for the phenomenon in *Descartes' Error.*

16 Stalnaker's approach is remarkably similar to the hypothetico-deductive method of Fogel (1970, 1983, 1989), whose work is discussed below. Fogel was working before the development of conditionals and possible worlds theory in philosophy and can be seen as an empirical precursor of what Jackson (1991: 7) and Stalnaker (1976: 65-75) prescribe.

17 'I take it that the subjunctive mood in English and some other languages is a conventional device for indicating that pre-suppositions are being suspended, which means in the case of subjective conditional statements, that the selection function is one that may reach outside of the context set' (Stalnaker in Jackson 1991: 145). This is an exact model of what can be seen in Fogel's quantitative, and Hawthorn's qualitative work in history, as is shown below.

18 However, an important question, addressed by Ferguson (1997) and Ryan (1991), then arises as to how many prior antecedents can reasonably be introduced, especially in the context of particular forms of knowledge, discourse or genre.

19 'Parallel universes have existed in the fantasies of science fiction writers probably ever since the genre began. Parallel or distorted duplication of what already exists is indeed an important feature of parallel universes according to the way some physicists view them' (Wolf 1988: 27). Deutsch (1997) in *The Fabric of Reality* makes the same case from the point of view of theoretical quantum physics, and the research discipline of quantum computing. According to Deutsch we do not need other deep theories to tell that parallel universes exist, since single particle interference phenomena in quantum physics tells us that: 'The quantum theory of parallel universes is not the problem, it is the solution. It is not some troublesome, optional interpretation emerging from arcane theoretical considerations. It is the explanation - the only one that it is tenable - of a remarkable and counter-intuitive reality' (Deutsch 51). See also De Witt, Bryce and Neill (1973) in *The Many Worlds Interpretation of Quantum Mechanics.*

20 'Let me sum up the elements of the quantum concept of time. Time is not a sequence of moments, nor does it flow. Yet our intuitions about the properties of time are broadly true. Certain events are indeed causes and effects of one another. Relative to an observer, the future is indeed open and the past fixed, and possibilities do become actualities. The reason why our traditional theories of time are nonsense is that they try to express these true intuitions within the framework of a false classical physics. In quantum physics they made sense, because time was a quantum concept all along' (Rees: 287). The physicist's claim is one of transcendental realism; for, as Rees observes, the idea of 'eternal inflation' in cosmology which informs such thinking may be speculative, but it is highly pragmatic. Quantum theory undoubtedly works for physicists, who apply it confidently but unreflectively: 'the average quantum mechanic is no more philosophical than the average motor mechanic'(256).

21 As Edgington points out, Lewis has no school of followers who accept his claim that all possible worlds exist. Yet the new claim of mainstream quantum physics, mathematics and cosmology amounts to just that. I am grateful to Dr Azam Mashhadi, of Oxford University, for correspondence and insights into the mathematical and scientific literature on this topic.

22 Reporting on the results of experiments to test Sheldrake's ideas, Tudge (1994: 42) points out the difficulty that 'results have been mixed: some are promising, some not'.

23 Hawthorn's approach is innovative in terms of critical thinking and history. Compare Karras's (1987) more traditional approach. Ferguson's (1997) anthology of professional historians' attempts at counter-factual history illustrates the strengths of the approach, and the weaknesses that arise when insufficient rigour or inauthenticity are allowed expression.

24 'Don't alter so much as to require a wholly different world unrolling itself from the start. Don't pretend that the future could have been foreseen at the time of the event. Always ask, of any situation involving human agents, 'could these men, in the circumstances in which they found themselves, with the information that was available to them, have acted other than they did?'" (Hawthorn 1991: 158). See Strauss (1988) for a discussion of Hawthorn's 'sensible rules'.

25 He shows, for instance, that Braudel was mistaken in saying that the biological regime in pre-modern Europe was fore-ordained; that fertility in 17th century France, far from being 'natural', can be demonstrated to have been affected by particular sets of social arrangements. He looks at the origins of US intervention in Vietnam in similar terms.

26 Armstrong (1986) argues that possibilities are combinations of actually existing elements, so that possibility is dependent upon actuality. Exception is made, however,for the possibility of further individuals: but not for further properties and

relations. This argument has implications, in my view, for the *anthropic* account of cosmologists. The Great Chain of Being theory (Lovejoy 1936) concentrated on inhabited possible worlds. See Bacon et al (1993) concerning discussion of *combinatorialism.*

27 Evans (1997) is critical, for instance, of Braudel's view of history as consisting of slow-moving cycles; and wishes to say that history produces generalisations, not laws which are predictive (60). Evans cites, as an example of the dangers of historicist prediction, his own failure in 1989 to predict the fall of the Berlin Wall and collapse of the Soviet Union (Evans 1989: 105-6). Nevertheless, historicist but 'real' phenomena such as the *Kondratieff Cycle*, waves of economic development with a length of about 40-60 years, suggest that the scope for improved prediction, just as with weather forecasting, will partly depend on the technology available (Johnston 1994: 305-6).

28 'Generalisable answers of what we conventionally think of as a causal kind have ceased to be persuasive. The causal connections or runnings-on that we have been able to detect in human states of affairs have turned out either to have to be phrased at a level that is so general as to be insufficiently informative and not address our interests in explanation; or to be so conditional as not to be general; or, when they have generated testable predictions, to be false' (Hawthorn 1991: 160).

29 He cites Lewis concerning Aristotle's observation that practical wisdom is not concerned with universals only; it must also recognise particulars, for it is practical and practice concerns particulars. Practical reasoning is done by particular agents in the light of their particular experiences and the particular circumstances in which they find themselves.

30 Ferguson (13) cites as an example the popular attribution of Richard III's fall to a lost nail: *For want of a nail, the shoe was lost, For want of a shoes the horse was lost, For want of a horse the rider was lost, For want of a rider the battle was lost, For want of a battle the kingdom was lost.* This nursery rhyme is based on a chain syllogism, thus supporting the claim that anticipatory socialisation through play and informal logic can prepare for later work in philosophy and logic. Leinhardt (1993) shows that such teaching is most effective when woven subtly into the curriculum using professional artistry and judgement.

31 Ferguson (12-13) characterises this as 'the case of Cleopatra's nose' in which Anthony's passion for her proboscis determines the fate of Rome. In a chapter on what might have occurred if Hitler had successfully invaded England, he gives as an example, of the failure of Stuka bombers over three days of intensive bombing to demolish a five-foot wide causeway, enabling a defence force of half a million soldiers to escape to England (299). Ferguson is accused in turn, by Clarke (1997), of engaging in attenuated and 'tedious whimsy' in drawing on many threads of 'virtual history'.

32 Driver (1982) emphasises the importance of the counter-intuitive in science education.

33 See also Fogel and Elton (1983) and Fogel and Engerman (1989).

34 Although not without its critics, Fogel's method which claimed a 'virtually unassailable' level of objectivity, has been attacked both methodologically and on the grounds that, like Popper, he offers no scope for Kuhnian post-empiricism and paradigm (Evans 1997: 42).

35 Scientific history differs from traditional history in three ways. It prefers a systematic rather than a *stochastic* (sic), or conjectural description, of the general subject matter; it favours the collective and the general over the unique and the particular; and it values quantitative over literary evidence. 'That the data of economic history are often fragmentary, does not preclude the formation of effective empirical tests of quantitative hypotheses...All warranted statements regarding the contribution

of railroads to economic growth must be based on hypothetico-deductive systems. These statements invariably imply or explicitly contain a comparison between actual events and relations, some of which can be (and were) observed, and those events and relationships that would have obtained in the absence of railroads' (Fogel 1970: 245) Fogel prefers 'multi-authored, collaborative projects' to a solitary, individualistic work style. See Berkhofer (1985) on Fogel's (1983) debate with Elton over the merits of his approach in their *Which Road to the Past? Two Views of History.*

36 Fogel's general philosophical stance on criteria of verification and falsifiability is therefore similar to Popper's scientific, 'hypothetico-deductive' method. Corson (1990: 41-24) offers a worked example of the approach that Bhaskar takes. See Ogborn and Bliss (1994) for a similar approach in science education and computing.

37 For example, in a medical study using data mining (Angoss 1996), surprising facts emerged about the correlation between survival rates, the time taken to perform a kidney transplant operation, and the length of time kidneys were stored on ice prior to transplant. A study of mortgagees produced the counter-intuitive finding that frequently-late payers were less likely to default than those who suddenly made one late payment.

38 For example: 'it is easier to replace an exceptional outcome with a more normal counterfactual alternative than it is to replace a normal outcome with an exceptional counterfactual alternative' (Macrae et al 1993: 221).

39 Within the considerable literature on this subject see Gleicher et al (1990), Miller and Gunasegarami (1990) and Miller and McFarland (1986).

40 Byrne (1997: 217) shows how the mechanisms developed by psychologists to account for deductive inference can be applied to what she calls 'imaginary counter-factual thinking'; and that understanding our 'counter-factual musings' may lead to a better understanding of thinking in other domains, such as dreaming.

41 McHale (1987: 33-8) makes the case for the relevance of possible worlds theory to poetics. His study is of particular interest for the range of fiction he is able to identify and for links he makes with the work of Lewis (1983a) and Pavel (1975, 1982, 1986).

42 Our understanding of the dynamics of narrative action can be greatly enhanced by the work performed in artificial intelligence on the logic of plans and the interaction of competing schemes (7).

43 'The first is our native system, and its central world is the actually actual world (or more simply, the actual world), to which I shall henceforth refer as AW. The second system is the textual universe, the sum of the worlds projected by the text. At the centre of this system is the textual actual world, abbreviated as TAW. As a representation proposed by the text, the textual universe must be distinguished from the system it represents, which I shall call the referential universe. And just as the textual universe is offered as an image of the referential universe, the textual actual world TAW is proposed as an accurate representation of an entity external to itself, the textual reference world, abbreviated as TRW... axioms concerning the three types of actual world provide the basis for a possible world definition of fictionality' (24).

44 If Kripke says that possible worlds are stipulated not discovered, Putnam (1983) argues, this allows us to separate accidental from essential properties. This is the type of thought experiment conducted by Descartes with the 'cogito' in his Meditations. However, this in turn raises a problem over whether a world with redundant elements, such as occurs in natural languages, can be a stipulated possible world.

45 See also Eco (1979: 200-266) and Ryan (1991).

46 She provides stipulative criteria which reflect a 'folk psychology' account of belief (Churchland 1994: 308) that novels are not histories (Appendices 26, 27 & 28).

Hawthorn (1991: 167) says: 'If we were to ignore the conditions for inserting an alternative starting point into the actual world or those for judging how the alternative world would have run on; if we were instead to impose a general theory; the possibilities we would be entertaining would be possibilities not for an actual, but for what would itself be merely a possible. And at that point, our History or social science would have dissolved into a literature of the imagination.' However, I disagree with Hawthorn about the degree of latitude historical or specialist thinkers should be occasionally permitted. Post-modern, playfulness and latitude can be permitted as a sub-genre of historical scholarship, as is the case with some contributions to Ferguson's (1997) anthology. In science the oeuvres of Arthur C. Clarke, Jules Verne, Lakatos (1971) or Feyerabend (1975, 1978) have much in common. The divisibility of *ersatz* from real worlds becomes less easy to defend in light of the science fiction of Verne, Wells or Arthur C. Clarke, whose books anticipate later scientific developments. *Folk psychology* is used here in the sense of 'the pre-scientific, commonsense conceptual framework' that all normally socialised humans deploy when approaching novels (Churchland 1994: 308).

47 Her taxonomy could be extended to show how individual subject disciplines display a similar variety to genres in their relationship with possible worlds speculation and thinking. That is an important analysis, in my view, for educators to develop in their pedagogy. The application of Ryan's typology to subject specialist areas is, in my view, a pressing research agenda.

48 It has been claimed that *thinking* typically involves believing. Scruton (1983) has argued that there is an important exception, which is marked by the features of voluntariness and freedom from belief. This is the sort of imagination which consists in entertaining a thought while not accepting it as true. Scientists, for example, as well as historians and philosophers, often 'play' with an idea in attempting to throw light on a practical or theoretical problem, while nevertheless aware that such a thought might be false, even that it *is* false. They construct possible worlds. Thus concepts are used in a way that depends precisely on an awareness of freedom from belief. A Coleridgean 'willing suspension of disbelief' seems to be involved here.

49 Kearney's (1988) detailed philosophical, aesthetic and historical survey is of considerable interest.

50 Bricker (1987) deals with the proposal that reducing possible worlds to language can be refuted by the cardinality argument, that there are more possible worlds than there are linguistic entities provided by the proposal. He provides a method for circumventing such an argument.

51 Fictionalism about possible worlds, according to Rosen (1993), is the view that talk about worlds in the analysis of modality is to be construed as 'ontologically innocent' discourse about the content of a fiction. A version of this view is defended by Armstrong in his *combinatorial* theory of possibility. However, both Rosen's and Armstrong's fictionalist accounts fail to be innocent, since they imply that as a matter of necessity there exist many worlds.

52 I am grateful to Les Gottesman, of Golden Gate University, San Francisco, for observations on this topic. The ground covered by philosophers of education (Snook 1972) is similar; but the issue of 'inauthenticity' comes up more strongly in propaganda, as the alteration of dispositions by counter-factual means.

53 *Personal communication.* I am grateful to Professor Peter Medway, of Carleton University, Ottawa, for this and other comments.

54 This topic does not appear to have been treated by literary theorists or philosophers in terms of its possible worlds applications.

55 The various conceptions of worlds, domains, genres and other 'set theory' notions relevant to applied philosophy and education are suggested as a suitable topic for future research (see Overview and Prospects, page 279 of this study).

56 The assumptions of the New Criticism, post-war English teaching establishment are thereby refuted. Meaning is not encased or contained in language, but is co-extensive with the play of language itself. The link between text and meaning is cut. Authorial intention dissolves; and there can be no notion of some mystical interior of the text in which a non-linguistic essence or 'meaning' can ultimately be found. But here we have a problem: for it is just that claim of a central meaning which is only apprehensible through experience of the text, even though it might be experienced through a deconstructive approach, that Nussbaum appears to make. Some writers emphasise the possibilities of authorial intention rather more, while still seeing the text as a starting point only. Olson (1990: 442), for example, sees the central problem of academic literacy as being the fact that 'reading can be viewed as a series of attempt to overcome what is not represented in script, which is how the speaker intended the text to be understood'.

57 Shostack (1977) describes marketing *entities* as combinations of *discrete elements*, consisting of tangible and intangible *attributes*. Most products are combinations of the tangible and the intangible, Shostack argues; but in the case of a pure service, such as a massage, the object of sale is an entirely intangible item. The tangible or intangible may be more dominant, as seen on a continuum from products to services (Appendix 36). A dominant discourse concerning the marketing of services can be seen as very close here to the possible worlds, and ontological pre-occupations of traditional metaphysics and scholastic philosophy as described in chapter 1. The terms being used - intangible, attribute, element - are the very stuff of metaphysics as traditionally practiced.

58 'It is a mistake to think of linguistic usage as literalistic in its main body and metaphorical in its trimming. Metaphor, or something like it, governs both the growth of language and our acquisition of it. What comes as a subsequent refinement is rather cognitive discourse, at its most dryly literal. The neatly worked inner stretches of science are an open space in the tropical jungle, created by clearing tropes away' (Quine in Sacks ed. 1978: 60)

59 'Such pleasure perhaps owes its origin to, and is enhanced by an echo from, the metaphorical playfulness of childhood' (Swanson in Sacks, ed. 1978: 163).

60 'I think metaphor belongs exclusively to the domain of use. It is something brought off by the imaginative employment of words and sentences and depends entirely on the ordinary meanings of these words and hence on the ordinary meaning of the sentences they comprise'(Davidson in Sacks 1978: 31)

61 Lakoff relies on the twin notions of *conventional* metaphors, those habitual in the sense that Quine describes, and *novel* metaphors which are much rarer. This leads him into an incomplete exegesis, however, when he claims that the dominant metaphor of the well-known poem *The Road not Taken* (Frost 1955: 78, Appendix 38) concerns journeying for 'long-term purpose full activities'. Another reading is that it is a 'metaphysical poem' about *aporia*, in its Greek sense of a pathway that gives out and therefore about choice concerning 'possible worlds'. (See again chapter 2 for discussion of aporia and the ineffable).

62 For example, most people have had the experience of encountering a young person who has read Animal Farm or Gulliver's Travels without becoming aware of the allegorical or satirical dimension which corresponds to the Actual World of Ryan (1991).

63 'In Robert Bakker's work, the logical-mathematical is used in the service of interpreting dinosaur strides and extrapolating from this the possibility that these

creatures were warm-blooded. Bakker's spatial intelligence helped him to visualise the structure of dinosaur anatomy and to hypothesise about their metabolic rates' (Kornhaber and Gardner: 161). Their reference is to Bakker's (1986) book *The Dinosaur Heresies.*

64 Gardner (1995: 15). For a case study treatment of creative individuals see Gardner's (1994) *Creating Minds: an Anatomy of Creativity.*

65 Mackay (1995: 53) explains Pauling's approach to *stochastic* thinking: 'Pauling's style was that of a conquistador in the realm of science, much as Freud had claimed to be. He developed what he called his 'stochastic' method for solving problems, particularly for predicting the way in which atoms might arrange themselves to give a crystal structure... Unfortunately, the word 'stochastic' now has a different meaning -namely, determined by a random distribution of probabilities - so it gives the wrong impression of Pauling's method. A classical consultant told him that the Greek word meant 'skilful in aiming at, divining the answer.' If you are allowed to make an educated guess, then it has to be as good a guess as possible, in accordance with all the other facts that you already know. With a huge assembly of facts, Pauling could reduce the possibilities to a manageable number. He was very often right...The peculiar characteristic of crystallography is that any method of arriving at a preliminary arrangement of atoms is legitimate because it can be objectively confirmed or refuted by measurement. This matched exactly Pauling's stochastic strategy...he solved correctly perhaps 200 crystal structures.'

66 'There is thus no form of direct learning which can develop critical intelligence. One can only try to induce the spontaneous acquisitions of these ways of thinking.' (Bresson in Maclure 1991: 174-5).

67 See for example the psychologists, Garnham and Oakhill (1994), Johnson-Laird (1986, 1983, 1993) and Kaye (1994), and the neuroscientist, Clarke (1997).

68 Random' in chaos theory means that there is usually expected a result in which pattern, or logical form or order, will be discovered.

69 It has the 'oral formulaic' characteristics noted by other writers in the demotic epic form in poetry, just as the philosophical discussion has. The performer is influenced by a *canon* of 'strong predecessors', whose work is counter-pointed in the player's inner dialogue with her own idiosyncratic, or hermeneutic resources (see chapter 6). See Morton (1995: 25) for an assessment of Berliner's account.

70 Wit and ready-wittedness may also be an important example of an unconscious disposition and process in which a body-self instantiates thought which by-passes the conscious mind. Wit combines the affective and emotion in two senses. It proceeds directly from one's embodiment, in its origination often by-passing cognitive processes along the lines adumbrated by Damasio (1994). Evans (in Honderich 1995: 464) points out that for Aristotle a creature endowed with humour must be embodied. But since the bodily postures and motions which are characteristic of laughter can occur in the absence of amusement, laughter cannot be a simply physical occurrence. Aristotle uses these considerations to support a theory of human nature according to which a person is not identical with a body, yet does not exist without one. The argument can be applied to say that thinking, and the formation of dispositions and virtues, also can only take place in an embodied form (see chapter 5).

71 'The operation of *somatic markers* on unconscious thought processes would explain correct intuitions: mathematicians tend to consider consciously only lines of thought that might be fruitful; the others are unconsciously blocked by somatic markers' (Sutherland 1994: 287). There is empirical evidence from the scientific studies that *stochastic hearing* has implications for learning. It has been found that listening which takes place against a background of some randomised noise rather than

absolute silence may result in neurologically better performance and perception (Pool 1996: 18)

72 The question of wit, humour and possible worlds has not been looked at in relation to possible worlds, conditionals and counter-factuals. Publication in this area is sparse, modern philosophical work on humour being rare: but see (Lauter 1964, Monro 1951, Morreall 1983, 1987; Nelson 1990; Swabey 1961). Although laughter, like language, is cited as one of the distinguishing features of human beings, the philosophical literature on the subject is sparse. Evans (in Honderich 1995: 464) wishes to see the topic of laughter given more attention in the philosophy of mind.

73 'I am not saying the mind is in the body. But it contributes a context that is part and parcel of the working of the normal mind' (Damasio 1994: 226). Damasio gives a neuro-scientific demonstration 'that mind is probably not conceivable without some sort of embodiment'; and that mind derives from the entire organism. The condition of complete *anosognosis* (the inability to acknowledge disease in one-self) is that patients, unlike all other patients including temporary anosognosics, never refer to the self (237). This absence of emotion and feeling can break down or preclude rationality, Damasio argues, because the current instantiation of the concept of self has been 'irremediably perturbed' (241).

74 See Motluk's (1994: 33-37) discussion of the neurological evidence on synaesthesia. Amid the renewed interest in synaesthesia and learning, one school of thought follows Cytowic in arguing that the phenomenon is characteristic of normal brain physiology: 'in most people, sensory crossovers occur as a normal part of perception without their knowledge. In synaesthesia, perception itself is bared to consciousness' (Motluk: 37). Others claim that the brains of synaesthetics harbour unusual neural pathways; see Baron-Cohen's (1995) review of *The Man Who Tasted Shapes* and Luria's (1987) study of a mnemonist. Gleick (1992: 131) gives instances of the physicist, Feinman, seeing numbers in colour; and of his auditory and kinaesthetic method of stimulating thought by 'rolling about on the floor as he worked on a problem'.

75 Dreyfus (1995) points out that the Merleau-Pontian account written fifty years ago postulates notions of 'intentional arc'; and 'the tendency to acquire a maximum grip' - a tight connection between the body and the world, in which dispositions as skills are subject to finer and finer adjustment through the active body's experience of changes in the world.

76 'The body is that 'natural self' which we each of us are before the opposition of felt and world effects that de-naturalization of experience which is then taken to be the self-evident foundation of any reasonable understanding both of the self and the world' (Merleau-Ponty in Macann 1993: 182). Macann asks: 'What is the distinctive contribution made by Merleau-Ponty? In my estimate, it is the grounding of the being of human being in its being a body - with all that follows therefrom. And a very great deal does follow therefrom' (Macann: 200). There is a striking parallel here with Eliot's (1953) account, as a literary critic, of the 'dissociation of sensibility' which is alleged to have occurred around the 18th century (see chapter 5). The matter becomes extremely important when we come to construct a curriculum for the plastic arts, dance, drama, physical education, and technology, which are thereby given a higher status.

77 Medway (1986) offers the more mentalist claim, that argument is 'social action'. This is a view shared by Andrews (1992) who wishes to re-affirm the importance of rhetoric; and by (Kuhn 1992) who believes that most higher order thinking occurs as 'argument' about action. However, I have suggested earlier, in relation to Sartre, that such accounts are excessively cerebral. Egan's typology of educational development

and understanding as consisting of the somatic, mythic, romantic, philosophic and ironic is presented in *The Educated Mind* (1997).

78 'Pessoa argued that his three main pseudonyms (Alvaro de Campos, Alberto Caeiro and Ricardo Reis) were not mere aliases, but evidence of the multiple personalities we all possess, contrasting facets of our innumerable...what Pessoa defined as a constant and organic tendency towards de-personalization and make-believe' (Pontiero 1992: 5).

79 The epistemological status of multiple intelligence or personality would change if a 'scientific' or neurological basis were to be found for it.

80 Castells (1996: 372) discerns the rise of a *flexible, global network and information society*, a virtual reality in which global power, employment and culture will be increasingly based on the 'production and consumption of signs' predicted by Baudrillard (1988).

81 The 'greatest authors' take over the role of 'places' in the Canon's theater of memory, and their masterworks occupy the position filled by 'images' in the art of memory according to Bloom (1995: 39). Conversely, Luria's case study of the 'memory man' shows that for a canon to be established a special kind of forgetting, as well as remembering must take place.

82 In relation to well-established clinical links between the pathologies of multiple personality and child abuse, Hacking (1995) raises important questions concerning the 'crystallisation of the presumption that there are fixed truths to be known about personal history'. His argument has important implications, not least for jurisprudence. See Davison and Neale's (1996: 634-5) discussion of 'Dissociative Identity Disorder and the Insanity Defence'. Hacking (1995: 7) demonstrates the new 'normalcy' of the concept as a widespread phenomenon which is not of itself unwelcome or pathological, as the literary examples demonstrate. See also McKellar (1979) for empirical accounts of fugue, automatic writing, and childhood 'imaginary friends'.

83 For example, Davison and Neale (1996: 184) report studies supportive of the idea that a person accused of murder might feign another personality in order to avoid punishment.

84 He was able to dismiss his 'fugue' symptoms (as they would be seen psychiatrically), by means of his distinctive intellectual and philosophical position on deconstructionism.

85 I am grateful to Professor Edgington for an interview and discussion on this topic (Thornbury 1997, Appendix 30).

86 The argument of Scruton (1974, 1983), that aesthetic truth of literary narratives is predicated on so-called temporary belief, is compatible with their being 'playfully' derived, counter-factual conditionals - 'what ifs?' accepted temporarily for the purposes of imaginative encounter.

87 Everard (1994) examines the question of modal realism and rule-governed counter-factual thinking. Changed notions of creativity, including those among teachers are reflected by Fryer and Collings (1991) and Bailin (1994). For a coherent claim concerning post-formal thinking see Kincheloe and Steinberg (1993). There has been a range of views and revived interest among philosophers concerning the nature of metaphor. For a fuller discussion of imagination in education see Egan and Nadaner (1988) and Egan and Gardner (1992).

88 See Torrance (1973) for a standard exposition of the earlier view. Memory and the presence of previous knowledge require emphasis in classrooms if the best possibilities are to be achieved. Any plan for a pre-philosophical curriculum in a school or college would therefore need to give considerable thought to what is known

about the role of memory in learning and thinking (Neisser 1982: 3-19, Garandiere 1991: 127-135).

89 Pretending 'as if' is usually done with other children, or for the child who has no-one with whom to play, with imaginary people or dolls. Fox's suggestion that early thinking is a narrative dialogue fits this thesis. Such an account places play in a much more sensible context; and also gives us the capacity to justify playfulness at later ages and stages of development - for example in whimsy, fantasy, poetry, the roman a these, the utopian fiction drama and so forth. Piaget's early accounts of moral rule making, and child development research on deceit (Gold 1993), endorse this point. See chapter 8 concerning the use of *vital lies* by teachers.

90 MacLaren (1986, 1989) advocates a teaching disposition that encourages students to think about their thinking in a post-formal manner. Students will learn to conduct their identities in a new way that parodies the rigid conventions of modernism, he claims, by assuming the role of post-modern stand-up comics and social satirists.

91 See Wittgenstein (1958:13-17) for an explanation of ostensive definition. Wittgenstein observes: 'Someone coming into a strange country will sometimes learn the language of the inhabitants from ostensive definitions that they give him; and he will often have to *guess* the meaning of these definitions; and will guess sometimes right, sometimes wrong (15)..In giving an ostensive definition for instance we often point to the object names and say the name'(19). An example of the 'looser' version in the approach to history teaching which is nevertheless fully conceptualised is provided by Leinhardt (1993: 46-74). She shows how a historical concept can be possibilistically sketched and built up over a period over time through a series of lessons (see chapter 8). The resemblance to the 19th century Herbartian notion of 'apperception mass' (Gamo 1908) in her theoretical position is striking.

92 An Aesthetics paper was introduced into the AEB philosophy course in 1994.

93 Morton (1969) suggests that the plethora of English utopian texts arises from the fact that its inhabitants begin by living on an island (i.e. in a conditionals thought experiment). A modern English example would be Frayn's (1973) *Sweet Dreams,* about living and working in heaven. Ryan (1991) provides a schema for classifying such works (see Appendices 27 & 28).

94 If there are to be rules for thinking possibilistically within the subject discourse areas, and classroom syllabuses creative thinking which is rule-bound but not narrow will need to be encouraged. The National Curriculum Council cross-curricular document, *Curriculum Guidance No 6* (1990), on Economic Awareness Education suggests the idea of 'opportunity costs' where children consider other choices they might have. This might seem to involve a finite set of possible choices. However, one would want children's thinking about economics to be flexible and imaginative, as well as their solution to be economically viable in more than the most immediately close of possible, economic worlds.

95 Teachers of economics, for example, have moved away from their traditional concept of 'economic rationality' which as proved inadequate in constructing predictive models of economies. Similarly, the teacher of health education might decide, on the evidence of the psychological research on counter-factual thinking, to encourage unrealistic optimism and 'illusions of control' in students - as the basis for a confident pursuit of the good life. Teachers of religious education or critical thinking, adopting Lewis's position, could however find themselves pressed to tolerate totalitarian viewpoints, or religious fundamentalism.

96 See again the discussion of transferability in chapter 3.

97 Murris' claim that any pre-philosophical curriculum for children ought to include a large amount of stimulus, humour, post-modernist 'playfulness' and irony supports the post-modern viewpoint. Material for encouraging the disposition of playful ready-

wittedness can range from Mexican hat jokes with infants to deconstruction theory with sixth form students. Murris (1993a: 30-31) makes a persuasive case for her approach in the early years through picture books.

98 For example, *Choose Your Own Adventure Series*, in which the child is told 'You're the star of the story! Choose from 33 (or so) possible endings' were published from the early 1980's: but had limited success. Three examples are given in the bibliography (Brightfield 1985, Kushner 1985, Packard 1981). On the other hand, Ayckbourn's theatrical experiments with denouements which changed nightly, achieved favourable public and critical reception.

99 'Human being (sic) exists as anticipation of its own possibilities: it exists in advance of itself and grasp its situation as challenge to its own power or learning what it may do, rather than what it must be. Human being is always reaching out beyond itself; its very being consists in aiming at what it is not yet' (Heidegger quoted by Grene in Edwards 1967: Vol 3, 460).

CHAPTER 5

Dispositional claims for teaching philosophy and pre-philosophy.

1. Dispositions as causal possible worlds

The account of transcendental and modal realism, conditionals, counter-factuals and possible worlds advanced in chapters 3 and 4 leads also to a claim for causal and ethical dispositions. This is of significance for any philosophy and pre-philosophical curriculum in which ethical education is projected. This chapter discusses philosophical conceptions of the dispositions, empathy, and cognitive emotion, and traces an increasing emphasis on dispositions in the critical thinking tradition.

Interest in the *dispositionality of causation* is long-established and applies to both physical causation in the non-human, material aspects of the world, and the theory and the basis of ethical or moral dispositions within virtue ethics (Felt 1996) and deontology. One school of thought sees all causal claims as implying hypothetical or

conditional statements which are dispositional. The concept of dispositionality can be then identified as central to any theory of conditionals and, therefore, counter-factual and possible moral worlds. Thus Pollock (1976), for instance, stipulates that dispositions are subjunctive conditionals which can be subjected to a possible worlds analysis.

Some philosophers have argued that there is no more to dispositions than their associated conditionals. Nothing needs to be occurrent necessarily, and a disposition can be unknown or unobservable (Ryle 1949). A disposition's basis is viewed as at least partly the cause of its manifestation. However, Prior et al (1982) argue that of three possible definitions of dispositions, two are seen as causal (even if the foundation of the disposition is separate), while a third argues that dispositions are 'causally impotent'. Sober (1982) also disputes the claim of *supervenience*, that dispositions are 'dormative virtues' and that dispositional properties are identical to their physical basis - as when opium's 'dormative virtue', for instance, inheres in its physical structure. He argues an 'equivalence thesis' which equates the existence of a dispositional property only as far as the truth of a subjunctive conditional.

It is sometimes held that even the basis of dispositions is inherently categorical, and pertains to the haeccity of the particular person possessing that disposition. Armstrong (1968, 1996) claims that the bases of dispositions are both categorical and transcendental, and *combinatorial* in that different accounts should be given for the dispositions of persons as opposed to material things. Gibbard (1990), for instance, argues, drawing on evolutionary theory, that human beings have a categorial, and therefore unconscious disposition towards the seeking of shared norms necessary for biological survival - an example being reliability in ritualised, social arrangements. Such arguments accord both with the Bhaskarian account of transcendental realism as being categorially based, which was examined in chapter 3; and with the case, made in chapter 4, that some modalities of thinking by-pass 'ordinary' consciousness.

Virtues are traditionally assumed to be conscious. However, Lloyd (1994) and others argue that the unconscious can be seen by connectionists in computing theory as a set of complex dispositions embodied in elements of conscious experience.[1] Botterill (1994) defends the *folk psychology* assumption of a distinction between beliefs as active, occurrent thoughts, and beliefs as dispositions, as resolving problems of propositional theory found in computing. Belief is a disposition in

computational circumstances, similarly asserts Kaye (1994). Greco (1993) argues that the concepts of virtue epistemology and *close possible worlds* can be brought together. Cognitive virtues should be understood as emerging from the disposition which will make us reliable in seeing relevant possibilities occurring in *close possible worlds* rather than being concerned with the prospect of massive error in far-off worlds. [2]

2. Dispositions in ethical life and education

Interest in virtues and dispositions on the part of critical thinkers or those wishing to see philosophy taught in schools has proceeded from two separate philosophical traditions: these are concerned with *moral philosophy* in the sense of right conduct, in the deontological and Kantian tradition (O'Neill 1990, MacIntyre 1981); or *virtue ethics* in the Aristotelian tradition (Mautner 1996: 593). The distinction re-emerges in the discussion of critical thinking approaches to dispositions where, for instance, the notion of habit as a duty is invoked (see below). [3]

Virtues in the ethical life are usually defined in Aristotelian terms as settled dispositions of the mind which determine choice (Mautner 1996: 592). The importance of ethical dispositions is argued in relation to trust (Baier 1986), as half-way houses between action and capacity by (Kenny 1992), in democratic life by (White 1996, Arnstine 1995), in change in flourishing ethical life by (Williams 1987), and in relation to courage (MacIntyre 1988, Rorty (1986). Williams (1987) argues that since dispositions precede virtues they have more importance, for it is the formation or changing of dispositions that determines what virtues or faults we finally settle upon.

Virtue is seen as half-way between a capacity and an action in a somewhat similar way by Kenny (1992: 84). The idea of a disposition as critical consciousness in the preparation of virtuous action can be seen in the Sartrean account of choice in relation to facticity and being. It is necessary, especially in the education of the young, to deal with transitional 'becoming' between capacity and action. Hence, there is need for a strong account of existential authenticity, as Bonnett (1994) urges for the primary classroom. Issues of *authentic choice* arising in the volatile half-world

between capacity and action assume considerable significance in the education of the young.

Dispositionality in ethical or moral choice, and other more neutral processes of planning to undertake tasks, can therefore be seen as being to do with prospective action in relation to conditional or possible worlds, domains and schema. Such planning appears to take place within sets or classes of activity, characterised by psychologists as *schemata, frames, scenes and scripts*, for which they have increasingly sought to give a *connectionist* account (Boden 1994, Eysenck and Keane 1995, Johnson-Laird 1993). These processes are mapped criterially in Ryan's (1991) taxonomy of different types of narrative, literary and fictional discourse about possible worlds. They emphasis *dynamic memory* and background knowledge theory (Schank and Abelson 1977, Schank 1982), in a connectionist, *explanation-based view of concepts* which replaces the *attribute-based* conception of theoretical knowledge (Van Mechelen et al 1993, Lakoff 1993, Putnam 1975a, 1975b). Such processes can also be seen as *stochastic* (see again chapter 4).

3. Dispositions in counter-factual thinking

The imagining of, and reflection concerning counter-factual 'possible worlds' of conduct, can have a profound empirical effect; both on how choice is regarded, and the way in which dispositions come to be sustained, changed or discarded. [4] Counter-factual research supports the case argued by Johnson (1993) that 'moral imagination' is informed by metaphorical thinking, combined with memory, narrative and personal reflection.

An extensive series of counter-factual studies has examined moral stance, in regret, blame and 'other choices one might have made'. They show that moral insight can be acquired through quite practical, self-reflective thinking through possible worlds talk of 'how things might have been' in a variety of areas of life (Roese 1997). [5] For example, studies have been made of counter-factual thinking in the ethical areas of: regret and responsibility following decisions (Connolly et al 1997); regret and elation following action or inaction (Landman 1988); the assignment of blame (Creyer and Gurhan 1997); self-blame and 'perceived avoidability' following a traumatic event

(Davis et al 1996, Fraser 1996); the rhetoric of torts in relation to how advocates help jurors think about reasonableness and responsibility (Feigenson 1995); 'legal story-telling' and argumentation (Scallen 1995); implications for blame in rape cases (Nario and Branscombe 1992); and cause attribution in accident-related judgements (Williams et al 1996).

Thinking about how one's life might otherwise be, and 'what might otherwise have been done', has been extensively studied (Branscombe et al 1996, Ngbala and Branscombe 1997). These studies have focused on causal attribution and hindsight (Roese and Olson 1996, 1997), remembering and regretting (Medvec and Savitsky 1997), thinking about personal decisions and 'what might have been' (Thompson 1997, Landman and Manis 1992), and the mid-life perceptions of women concerning their 'missed opportunities' (Landman et al 1995)

The psychological studies tend to lead towards a phenomenological philosophical perspective. For example, Macrae (1992: 67), studying the judgements of those awarding victim compensation, found that the more easily an alternative to an event was imaginable, or presented, to panel members 'the more extreme their affective reaction' was to that event. [6] Thinking about what might have happened if a careless driver had been more prudent tended to result in more severe condemnation of his or her action, and an increased 'sympathy' and award for the victim (Macrae, Milne and Griffiths 1993). [7] The relationship between counter-factual thinking, gender and the dispositions featured in studies undertaken by Landman (1988), and Landman and Manis (1992). Defining counter-factual thinking as 'the process of imagining alternatives to reality - what might have been', half of a sample of young women reported regret over various life choices and said that they would act differently if they had their lives to live over again.

> It is common to imagine states counter to the realities of having married early, having curtailed one's education, and having experienced unsatisfactory interpersonal relationships....or that have prematurely closed off important life options ...(these) most often generate counter-factual thinking. (Landman and Manis 1992: 477)

4. The case for cognitive emotions

Byrne (1997: 220) as described in chapter 4, makes the important claim that counter-factual thinking, as a distinctive and unusual blend of the cognitive and the affective which bridges cognition and emotion, has ushered in a new era of research representing 'the coming of age of the psychology of thinking and learning'.

Byrne's contention is supported from other sources. Growing empirical evidence of a symbiosis between the cognitive and affective is provided by Damasio (1995) and by Clarke (1997) who, from a neuroscience and computing perspective, argues that 'radical embodied cognition' (148) combines with emotion in the 'embedded mind' (88). Maclure (1991) comments on a growing tendency among psychologists of thinking to recognise the important role that attitudes and motivation play in thinking. Boekaerts (1988) claims that the boundaries between cognition and affect are 'at long last being pulled down', and reports increasing interest in classroom, curricular and pedagogic approaches.

The proposal that a unified theory of thinking may emerge from research into counter-factual thinking has particular relevance to ethical life. If counter-factual thinking is central to the formation of dispositions and virtues in relation to possible moral worlds, then any philosophy and pre-philosophical curriculum will require a theory of counter-factual dispositionality. [8]

New ground on the relationship between feeling and thought, cognition and emotion or affect, has been explored philosophically by Scheffler (1991) in a significant development. Scheffler seeks to unify cognition and emotion in an philosophical account, by arguing that they are not mutually exclusive concepts and that there is evidence for the existence of *cognitive emotions* (4-9).

> The growth of cognition is thus, in fact, inseparable from the education of the emotions. (15)

Scheffler identifies cognitive thought as being related to three general forms of emotion, the rational passions, perceptive feelings and theoretical imagination, which are the organising emotions of a rational character. There are, he claims, two emotions which are specifically cognitive; the joy of *verification* and the feeling of

surprise. The nature of cognitive emotions he sees as analogous to moral emotions such as indignation and remorse. As Standish (1993: 117) observes, Scheffler's account is not fully developed, but it clearly 'rejects the common assumption that cognition and emotion are worlds apart' and 'illustrates coherently the ways in which rationality and the passions are inter-twined'. There is a striking similarity between Scheffler's proposal and the literary theory of Eliot, who argued that the metaphysical poets 'incorporated their erudition into their sensibility' thus combining cognition and emotion:

> Their mode of feeling was directly and freshly altered by their reading and thought. In Chapman especially there is a direct sensuous apprehension of thought, or a re-creation of thought into feeling, which is exactly what we find in Donne. A thought to Donne was an experience; it modified his sensibility. (Eliot 1953: 115) [9]

Andrews and Costello (1992), arguing for the revival of rhetoric and an important place for feeling, in any model of argumentative ability, claim:

> We are keen to emphasise the place of feeling in our emergent model of the development of argumentative ability. Argument has been associated with the cognitive because it appears to operate via abstraction. We think that argument is as much to do with passion and feeling... We see empathy, understanding others' points of view and sensitivity as important ingredients in the development of argumentative skill. (Andrews and Costello 21-2)

The case for an emphasis on argument and rhetoric, involving feeling, as central to the development of thinking has also been made by Kuhn (1991, 1992) and by Myerson (1994). Such an argument can be empirically supported from the work of Berrill (1990).

5. The caring disposition

Altered conceptions of caring in virtue ethics also have begun to conflate cognition and emotion, in raising such issues as: What is the role of empathy as a form of caring in the teaching of philosophy or critical thinking? These revised ethical conceptions eschew the traditional emphasis on procedural, intellectual virtues in thinking, and

stress the place of feeling and emotion as combined with cognition. A tradition in virtue ethics has arisen in which women philosophers and critical thinkers have argued for the importance of caring in relation to the dispositions (Gilligan 1982, Noddings 1978, Grimshaw 1986, 1991). Gilligan (1982) argues for a 'caring' re-interpretation of Kohlberg's rule-based approach to the formation of the moral disposition of young children. Grimshaw (1986, 1991) wishes to see concerns and activities which have traditionally been regarded as female given equal status, when very different social and moral priorities will be generated.

Kincheloe and Sternberg (1993) object to the way that thinkers in the 'Cartesian-Newtonian lineage' have characterised emotion as interfering with procedural knowledge.

> Indeed they see emotion as a pollutant in reason. Post-formal thinkers grounded in feminist theory unite logic and emotion, making use of what the emotions can understand that logic cannot. (Kincheloe and Steinberg 1993: 296-321).

What instead is needed, they claim, is a new description of post-formal thinking in which playfulness, and the particularity of knowledge are emphasised. [10] Whearey and Ennis (1995) claim that *caring* about good thinking is a disposition which counters the 'bias' of male rationality in critical thinking, and that 'caring' should therefore be recognised as one of Scheffler's cognitive emotions. These developments in virtue ethics are consistent with the case for principled charitableness or empathy in argument advocated by Quine and Davidson, as discussed below. They also produce a need to re-examine the philosophical and educational approach to empathetic thinking.

6. Is empathy a form of possible worlds creation?

Is *empathy* a disposition and cognitive emotion concerned with *caring* about the possible world of another mind? A type of counter-factual thinking involving both cognition and feeling could be argued to arise when one thinks empathetically. Traditional accounts of empathy, in aesthetics, distinguish between *Einfühlung*, 'feeling into' when 'one loses oneself in the other', from sympathy in which one's

identity is said to be preserved. Complete empathy is claimed to be aesthetic in giving access to experiences of beauty (Audi 1995: 219). Contemporary philosophers and critical thinkers have also been interested in more epistemological or cognitive accounts. [11] Quine (1990: 42) allocates an important place to empathy, for instance in the role of parenting, when in his theory of knowledge he advocates the notion of a *principle of charity* or intellectual forbearance in philosophical discussion. [12] He is supported by similar request for *charity concerning radical interpretation* made by Davidson, which Brueckner (1991) sees as resting on modal knowledge. [13]

Empathy is distinguished from other characteristics of children's thinking or use of language by child development theorists. Tough (1976) includes 'predicting and projecting' but not empathy, in her taxonomy of seven characteristics of children's language in primary school classrooms (Appendix 4). Interest in empathy is reflected within the various subject disciplines of the school curriculum. The leading US critical thinker, Richard Paul (1982) argues that empathy, a disposition to be empathetic to the point of view of others, is essential for all 'substantial' thinking, using social studies curricula to illustrate his position. Historians and history teachers have taken a particularly close interest in empathy. Collingwood (1946), for example, thought that history writing is primarily concerned with the 'sympathetic re-enactment' of events. Hawthorn's account of historical *plausible worlds*, it will be remembered, imposed severe limits on any interpretative speculation concerning human agency. [14] But other teachers, teacher educators, and critical thinkers concerned with history teaching, take a stance closer to that of Collingwood (MacIsaac 1996). Jenkins and Brickley (1989), for example, claim that empathetic historians explore areas counter-factually which would not otherwise be looked at.

> They prioritise, if not unasked, often 'unworked' questions, and in so doing, make the gaps in the dominant discourse obvious; in this task of deconstructing what is given, new possibles can emerge. (22) [15]

Cairns (1989) and Lee (1984), distinguish four ways of viewing empathy in relation to history teaching. [16] They see it as a *power*, empathy being the ability to discern other people's thoughts and feelings; as *achievement*, it being close to knowing what someone or some group believed, valued, felt or tried to attain; as a *process*, when it is concerned with discovering what someone believed by looking at the evidence; and as

a *disposition*, when it is the ability or willingness to take into account other points of view (Cairns 1989: 13-17).

Shemilt (1984) characterises empathy as that important form of thinking which involves transfer of one's thoughts or emotions across time. He offers a taxonomy of 'hierarchically ordered objectives for teaching and assessing empathetic construction' (Appendix 21). Historical explanation and description are differentiated by Shemilt in several ways: through action explained in terms of motive; by the notion that the actions and beliefs of predecessors are rational within their frame of reference; and, at the highest level, through the ability to recreate a sense of period in the round by the 'empathetic construction of perspective' involving the 'analysis of intentional action within standards and assumptions' of the period and time (79). Shemilt emphasises the cognitive over the affective aspect.

> Empathetic instruction should be taught and assessed as a cognitive not an affective activity more akin to the elaboration of and justification of hypotheses than to creative writing. (79) [17]

According to Kornhaber and Gardner (in Maclure 1991:161) empathy may involve the use of more than one form of intelligence, as in the case of the historian Tuchman's work. [18] Tuchman claims that sympathy is essential to the understanding of motive. The question must then be asked, is empathy a cognitive emotion and disposition?

7. Dispositions as narrative, literary and embedded

Nussbaum (1986) addresses the question of empathy by means of a post-Aristotelian perspective on philosophy and literature. She claims that thought and emotion, and consequently ethical understanding, are 'jointly embedded' and originate from texts - in a way which makes an experience of the text, rather than even the fullest description of its content and meaning, indispensable to understanding. Nussbaum (1990: 139-141) points out that Aristotle, being concerned that ethics must be directed to practical as well as theoretical concerns, sought to provide a sketch for the good life by turning to poetry and tragic drama. She argues for approaching ethical questions via the particular lives and complex predicaments of literary characters.

Nussbaum puts a hermeneutic case for her point of view. In *The Fragility of Goodness*, Nussbaum (1986:15) looks at the notion of 'moral luck' in Greek tragedy and questions the distinction traditionally made by philosophers between intellect and emotion. Her proposition is that moral luck, the notion of the tragic, and the nature of and exercise of dispositions and virtues, can only be properly understood through an actual reading of a tragedy; a process which incorporates responses of both thought and feeling.

> Our cognitive activity, as we explore the ethical conception embodied in the text, centrally involves emotional response. We discover what we think about these events partly by noticing how we feel; our investigation of our emotional geography is a major part of our search for self-knowledge. (Nussbaum 1986: 15) [19]

Nussbaum makes a claim for the integrity of thought experienced as feeling and for an ethical life pursued by such means. If Nussbaum's argument is accepted, values education then becomes based on a philosophical and pedagogic foundation which is at least in part narrative and literary.

> A conception of ethical understanding that involves emotional as well as intellectual activity and gives a certain type of priority to the perception of particular people and situations rather than abstract rules...this conception, rather than being imprecise and irrational, is actually superior in rationality and...finds its most appropriate expression in certain forms usually considered literary rather than philosophical. (ix)

One of her reasons for saying this is epistemologically procedural; an argument can best be stated in the form in which a drama or novel proceeds, rather than from a summary of the philosophical points it is said to present. [20] It is an argued narrative, in Struever's (1985) sense. [21]

Narrative, metaphor and imagination may be central to these processes of moral life carried on by means of cognitive emotion. The case that moral imagination is based on metaphor is argued by Johnson (1993) who wishes to replace a moral calculus based on rational utility with one of 'imaginative rationality' in the classroom, using a *metaphorical moral grammar* based on narrative sources. Johnson argues that it is our moral imagination that permits us to rehearse various, projected courses of action

dramatically, so that we may investigate the morality of the options available to us within particular circumstances' (Johnson 1993: 108). Schechtman (1996: 159) argues, in a complementary perspective, that one needs a narrative self-conception 'in order to be an agent at all'. Both Schechtman and Johnson see narrative as central to the constitution of moral self, since no moral theory can be adequate that does not take into account the narrative character of our experience. This matter is taken up again in chapter 8, in relation to teachers' lives and autobiographies.

The second part of this chapter turns to trace the increasing emphasis in the critical thinking tradition on the teaching of dispositions. The case for ready-wittedness and authenticity in ethical thinking is made; and some problems are raised concerning values education for dispositions within a philosophy and pre-philosophical curriculum.

8. The proceduralist account

Interest in dispositions has another provenance which it is now necessary to identify since it has had enormous consequences for educational practice. Early definitions of critical thinking, and reasons for teaching children philosophy, concentrated on abilities and skills rather than cognitive emotions or dispositions (Ennis 1962, Govier 1987, Scriven 1996, Thouless 1930, Toulmin 1958). One finds that criteria for good thinking are thought to be founded on 'procedural' dispositions analogous to the Aristotelian *intellectual virtues*. Critical thinkers do not at first claim to engender broader virtues of character in children. They distinguish, implicitly, between procedural-intellectual and substantive virtues. The question then arises: is this a qualitative or a stipulative distinction between procedural and other dispositions? The early procedural claim assumes that philosophising and critical thinking are purely cognitive forms of thinking which have no affective component. Any disposition to think well is argued to emerge from a habit of thinking well procedurally which has become established. In this the claim follows both Plato, who wished to deny or avoid an affective dimension in philosophy, and Aristotle who distinguished between intellectual and moral virtues:

> Virtue, then, is of two kinds, intellectual and moral. Intellectual virtue owes both its inception and its growth chiefly to instruction...Moral goodness, on the other hand, is the

> result of habit...By dispositions I mean conditions in virtue by which we are well or ill-disposed in respect of the feelings concerned.' (Ethics, ed. Thomson 1976: 91 and 98)

The possibility that one might possess the abilities and capacities to be a good critical thinker yet, waywardly, choose not to produce that behaviour appears not to have occurred initially to the advocates of critical thinking, informal logic and philosophy for children. They concentrate on arguments for procedural, intellectual dispositions, when their affinity with the perspectives of linguistic 'ordinary language' or analytic philosophers is very apparent. This traditional, Humean journeyman view of critical thinking and philosophy teaching as linguistic clarification was identified in chapter 2 as characteristic of much 20th century philosophy in the Anglo-Saxon tradition.

Many of those teaching philosophy at A level having been trained in that tradition, their enthusiasm for Austinian proceduralism is not surprising. Ward's (1983) broad argument for A level philosophy is typical of the linguistic approach to ethical questions. He argues as follows. One's philosophical convictions, general world-view or *weltanschauung* are said to play a key part in one's political, aesthetic, moral, jurisprudential, and other decisions. They influence how we act upon, and personally change, the world. Philosophy is the subject which helps us to clarify our thinking about ethical and other decisions, and which can thus provide systematic help in the making of those decisions (Ward 1983: 253).

Theron (1978: 5) justifies the Austinian teaching of philosophy to older students on the grounds of its contribution in procedural logic to the clearing up of muddled thinking; for example, over the fact-value distinction, the is-ought controversy, or the distinction between absolutist versus relativist theories of value. Govier (1987, 1988) and other proponents of *informal logic*, influenced as philosophers by the same tradition, place similar emphasis on correct inference procedures, the linguistic clearing up or avoidance of logical errors and solecisms, and the spotting of fallacies (see also Fisher 1989a, 1996). Others see *argumentation theory* in a similar way, as a clarifying tool (Van Eemeren 1987).

In these approaches, a disposition towards thinking with care and fairness in relation to the arguments of others is, simply and solely, intellectually procedural. Such dispositions are qualitatively different from true moral virtues, in that they more resemble the 'intellectual' virtues of Aristotelian ethics. Only indirect sympathy with

the virtue ethic of care, as advanced by philosophers like Gilligan (1982), can be discerned.

> What philosophy for children can do is improve moral judgement by developing in children the techniques involved in the making of such judgements, and by developing in them at the same time the love and the care for such techniques. (Lipman et al: 186-7)

That some moral education does occur is not denied, but it is said to appear as an incidental by-product of philosophical education. [22] Lipman et al specifically deny that teaching philosophical thinking involves a programme of moral education or a stance on any particular moral issue. They are neutral concerning any moral stance apart from procedural correctness in thinking. [23] However, as Andrews, Costello and Clarke (1993: 7) point out, the distinction maintained by Lipman and his colleagues between procedural and substantive values is inconsistent and therefore not sustainable. For adherents of the IAPC programme claim elsewhere to develop substantive democratic values such as 'mutual respect', within a pedagogy of a global community of enquiry and aims of social reconstruction (Splitter and Sharp 1995, McCall 1994, see again chapter 1).

9. Doubts over persistence

There seems to have been a point at which doubt arose over proceduralism. Advocates of informal logic suddenly find it necessary to modify their 'linguistic' claims for the central contribution of logic, or informal logic, to thinking well as a critical thinker. The *bouleversement* which occurs can be most clearly seen in the influential change of definition offered by Ennis, a major figure in the social movement of critical thinking. Ennis (1962: 81) originally defines critical thinking as 'reasonable reflective thinking that is focused on deciding what to do or believe', but later concludes that his definition is vulnerable to a serious criticism. It does not provide an adequate account of how a *disposition* or tendency to persist in thinking critically might come about.

Ennis therefore amends his *Streamlined Conception of Critical Thinking* (1991: 8-9, Appendix 7) to introduce a distinction between an *ability* to think well, and the *disposition* to do so in a regular and reliable way.

> Critical thinking is reasonable reflective thinking that is focused on deciding on what to believe or do, and having a disposition to think in that way. (Ennis: 1995) [24]

Ennis in effect rejects the Rylian view of the non-occurrent causality of dispositions, that 'nothing need happen', in favour of the behavioural view that dispositions must be episodes and states of observable behaviour. He proposes a revised schema which separates the *abilities* from *dispositions* in characterisation of the ideal critical thinker. As Romano (1980) puts its, one must take a Thomist view of the need for reliability of 'self' in any notion of what characterises a human habit, as for instance, in facing new situations.

Ideal critical thinkers are now to be thought of as having authentic, self-reflective, altruistic, and non-competitive dispositions. [25] However, these dispositions are largely procedural and cognitive in their nature; they are *intellectual virtues* in Aristotelian terms. There is, for instance, no deontological insistence on the will or duty, since for Ennis dispositions are cognitive habits involving equable persistence arising from training, rather than being based on volition towards thinking critically. They are in effect like the trained 'moral skills' described by Gotz (1989).

Nevertheless, Ennis's division of critical thinking into two parts - abilities and dispositions, represents a watershed of considerable significance. Critical thinking is henceforth to be linked with a broad and burgeoning interest among moral philosophers, and philosophers of education, in virtues and dispositions. Ennis's schema is influential in being taken-up and developed by others devising new, critical thinking taxonomies and inventories (Facione and Facione 1993, 1994).

10. Dispositions gather strength

Child development theorists (Katz 1993), psychologists (Perkins 1993), and teacher educators (Newmann 1993) soon respond to the new, canonical importance of dispositions in critical thinking as prescribed by Ennis; Perkins (1993), for instance, identifying seven key dispositions of good thinking.

Growing recognition of the need to emphasise dispositions is particularly clearly reflected in an ERIC Clearing House overview by Katz (1993: 3). Katz envisages important implications for educational practice, believing that it would be 'timely' to include dispositions in among 'important outcomes of education'. As a child development theorist, she reviews and makes the case for the place of dispositions as 'educational goals' without drawing on the philosophical and critical thinking literature.

Knowledge can be acquired, she warns, without a 'robust' disposition to use it: namely the tendency to exhibit frequently, consciously and voluntarily a pattern of behaviour that is directed to a broad goal which is an ethical purpose of the teacher. Teachers should encourage desirable dispositions but children are less likely to acquire them through didactic processes, than through exposure to people who model them successfully. Katz takes a procedural stance, however, in that the modelling which teachers are to undertake is to be of 'intellectual' dispositions. Nicoll (1996) argues in a similar way that early childhood educators should attend to such dispositions in their pupils as curiosity, fair-mindedness and flexibility.

The new strand in critical thinking exhibits a further emphasis, this being the need for evidence of social habits and dispositions of 'good' critical thinking in the classroom. Lipman et al (1980: 186-7) and Lindop (1990: 50-54) place classroom life in the centre of their approach. They hold on to the cultivation of procedural, intellectual virtues; but they also attach considerable importance to social dispositions, engendered within the affective context of classroom life of a community of enquiry. Thus Lindop (1990), having evaluated the Lipman program in the Australian setting, claims:

> Not only reasoning skills are exercised but also the disposition to be reasonable, as well as rational, about the various perspectives elicited during the classroom enquiry. (Lindop 1990: 54)

Dispositions are seen as socially and intellectually mediated - and constructed in classrooms. Social constructivism from a Vygotskian perspective is explicitly invoked (Lipman 1991). Growth in children's thinking is seen as occurring through 'assisted performance' supported by one's teachers and peers (Splitter and Sharp 1995, Tharp and Gallimore 1991). Thus the Institute of Philosophy with Children advocates an approach which could be characterised as *procedural, communitarian, social constructivism.*

Newmann asserts a claim for teaching dispositions through group life in 'class room thoughtfulness' through critical thinking (1990, 1993, Appendix 10). In doing so, he moves the argument on a further stage. For he stipulates a key disposition for children and teachers as good critical thinkers, namely *meta-cognitive awareness.*

> Dispositions are to be sought, but these will feature self-reflexive, traits of character. Among the traits sought, for example, is a tendency to be reflective - to take time to think problems through for oneself, rather than acting impulsively or automatically accepting the views of others. [26]

He advocates a social epistemology, similar to the emphasis in the literature of teacher education on the teacher as 'reflective practitioner', in which 'thoughtfulness' or meta-cognitive reflectiveness are pre-eminent (see chapter 8). Newmann introduces the idea of desirable *traits*, such as a curiosity to explore new questions and the flexibility to entertain alternative and original solutions to problems. [27]

11. Are dispositions traits?

Siegel (1988) perceives that a philosophical difficulty is faced by the critical thinking movement in relation to *traits*. How can a procedural account of intellectual virtues or dispositions towards rationality be retained, while assigning a strengthened role to character formation and traits ? Siegel is committed like Carr (1991, 1993) to a cognitive view of critical thinking as the *educational cognate of rationality*. But he shares Carr's (1991) view that a utilitarian or problem-solving approach to 'trait development' within the school curriculum simply will not be enough to help pupils

solve many moral problems. He wishes to embrace traits while retaining a tight hold on linguistic proceduralism. [28]

> This conception, which holds that the critical thinker is one who is appropriately moved by reasons (henceforth 'the reasons conception'), emphasises the connection between critical thinking and rationality, and also emphasises the importance of certain dispositions, habits of mind and character traits in addition to reasoning skills, for a full conception of critical thinking... a fundamental education ideal, infusing and informing the entire range of educational activities and affairs. (Siegel 1988: 2)

There seems for Siegel to exist an assumption that reasoned argument possesses some special affective quality, in that one is moved by, rather than merely consenting to good argument. Ideological rationality somehow carries intrinsic powers to persuade, in a manner reminiscent of the perlocutionary proposition in speech act theory (Austin 1962). Siegel thus comes near to the position of philosophers who see reason as a 'rational passion' (Peters 1972: 226, Scheffler 1991: 4). It is not clear, however, whether reason alone can create settled dispositions which might become virtues. [29]

A further difficulty raised by Vollmer (1993) concerns how dispositions might relate, or not relate to traits. Vollmer translates the epistemological debate over dispositional causality in the physical world into the ethical sphere. He argues that there may be two kinds of traits, one based on *act frequency* and the other on *mental frequency* dispositions. Vollmer claims that mental frequency dispositions are different from dispositional *properties* like abilities, capacities or powers based on beliefs and desires.

Van Heerden et al (1989) agree that traits are usually treated as dispositions, but think that this is problematic. Although four types of dispositionality can be identified, only one of them can be convincingly justified as a trait. Butler (1988) sees traits of character as complex states involving dispositions and, often, conditional desires which are used inferentially to explain behaviour. Schaller (1990) points up a major problem of connectivity in relation to the idea of critical thinking as duty. He observes that duties of beneficence, gratitude and self-respect are duties to cultivate dispositions which cannot themselves be defined in terms of obligatory acts.

12. Thinking well as a duty.

A minor strand within these developments places emphasis on Kantian notions of duty in thinking correctly. As mentioned earlier, philosophers have been concerned with *right conduct* and *virtue ethics* in two separate traditions, both of which appear in the critical thinking social movement (Mautner 1996: 593). Some educators interested in critical thinking urge character training and formation through the dispositions based on deontological, or Kantian ideas in moral philosophy. Habits of good thinking can be reinforced, they argue, by training which invokes notions of volition, will, duty and obligation.

Resnick (1987), for instance, follows Aristotle in linking habit deontologically with the dispositions. She asserts that the essential definition of a disposition involves the establishment of a tendency, or habit, arising as a sense of *duty*. An obligation to engage in thinking critically on the part of students needs therefore to be developed. Like Newmann (1993), Resnick distinguishes between higher and lower order thinking; and for her the disposition to engage in critical thinking is a necessary and prior condition for higher order thinking. [30]

However, a disposition:

> Should not be taken to imply a biological or inherited trait. As used here it is more akin to a habit of thought, one that can be learned, and, therefore taught. Engaging in higher order thinking with others seems likely to teach students that they have the ability, the permission, and even the obligation to engage in a kind of critical analysis that does not always accept problem formulations as presented or that may challenge an accepted position. We have good reason to believe that shaping this disposition to critical thought is central to developing higher order cognitive abilities in students. (Resnick 1987: 41)

Resnick envisages that such training will produce moral autonomy through encouraging students to be iconoclastic. Boekaerts (1988) distinguishes between *will* and meta-cognitive awareness in relation to obligation. For instance, a student may be aware of the strategy to use but unwilling to make the effort required. [31] Knowledge about effective thinking is not enough; we also need to have 'the will' to use that knowledge and to develop the habit of thought. McGuinness and Nisbet (1991) also advance a deontological requirement for dutifulness in dispositional habits

of good thinking. A thinking curriculum is not to be interpreted as a matter of inculcating skills. Rather, it concerns *will* and volition for which motivation needs to be fostered in relation to attitudes, habits and dispositions. [32]

These accounts of will or duty raise questions about forms of failure of dutifulness, and assessment, as well as choice and personal autonomy. In relation to assessment, there would be a problem for Norris (1992b), for example, who wishes to say that the disposition to think critically can count for assessment only when it arises as a spontaneous behaviour. But how can thinking which is pursued out of duty be authentic or spontaneous? There is also the question of what is to be the teacher's stance towards inauthenticity, sophism or contumacity. What is to be done, for example, when a student whom one knows could have chosen to do so, refuses to think well ? (see chapter 8). Although a deontological strand and emphasis on duty, can be detected in the critical thinking literature concerning moral education it should be said, however, that its significance is not great: few writers advocate the approach.

13. The problem of inauthentic dispositions.

One of the major problems about introducing the teaching of dispositions concerns the handling of 'inauthenticity'. Insistence on criteria of reflexivity, or self-reflectiveness in any thinking, but especially in relation to the dispositions, raises the question of how personal authenticity and 'good faith' in philosophical or critical thinking are to be identified. From Plato onwards, doubt has been expressed as to whether young people can be expected to undertake higher order thinking or philosophising reliably, in view of the immaturity of their feelings and emotions (see again chapter 2).

In *The Republic* Plato claims that the emotional immaturity of young children prevents them from being capable of undertaking philosophical activity in a serious manner, since they easily succumb to sophistry. It is not within the affective capacity of the young to think seriously, and to introduce philosophy at an earlier age is a mistake:

> And there's one great precaution you can take, which is to stop their getting a taste of [philosophical discussions] too young. You must have noticed how young men, after their first taste of argument, are always contradicting people just for the fun of it; they imitate

> those whom they hear cross-examining each other, and themselves cross-examine other people, like puppies who love to pull and tear at anyone within reach. (Republic 539)

He therefore concludes that philosophy is a subject for adults rather than children and that dialectic (philosophy) can be introduced only to those who, having reached the age of thirty years, have completed many years of training and study (537). Putnam (1985) argues, on the other hand, that ethical counter-factuals can arise only from Platonic attitudes or dispositions, and that to wait for adulthood would not be practical if students are to receive an ethical education.

The notion of *ironism*, which Rorty (1989) sees as essential to the act of and profession of philosophising, raises a similar issue to that of sophistry in that, in some way one is not being serious (see chapter 8). [33] Conley (1993: 1) fears that critical thinking can easily foster scepticism in the student. Shemilt (1988: 78) urges that empathetic thinking in history should be seen as cognitive hypothesising, since 'adolescents cannot be taught to empathise authentically'. [34] As the essentialist claim reveals (see chapter 2), such objections can be under-pinned by arguments taken from Piagetian child development theory. These hold that teaching children of school age to philosophise is 'psycho-genetically' impossible, since they are not sufficiently mature, or developed in the capacity for meta-cognitive thought (Kitchener 1990). [35] A rather different approach to 'inauthenticity' in thinking is found in the existential approach of Bonnett (1994). Bonnett sees the existentialist stand-point, with its notions of facticity, good faith, autonomy and growth of the person, as the essence of child-centred primary education and teaching (see also Bonnett and Doddington 1990, and chapter 8, section 7).

Not least of the problems over authenticity relates to the philosophical concept of *vital lies* (see chapter 8). People need to go forward with reasonable confidence in their lives on an optimism based on 'life-lies, pious illusion or holy fictions' (Martin 1995: 842); as the counter-factual research reveals, they profit from persisting in mistaken estimates of the possibility of encountering personal adversity (Sanna 1996, 1997). [36] However, teachers and students using *vital lies* also run some risk of falling into the pitfalls of 'bad faith' and inauthentic dispositions.

14. Paul and substantial, authentic dispositions.

Paul (1982), one of the most influential thinkers and practitioners in the critical thinking movement, sees the need to address *substantial issues* which engage the emotions and intellect of students. Having observed how the teaching of informal logic has simply not proved efficacious, Paul expresses reservations about any teaching of critical thinking which does not form *authentic dispositions*. By teaching critical thinking as techniques of argument, students are often encouraged to become 'more sophistic rather than less so, more skilled in rationalising and intellectualising the biases they already have' (3). [37] Paul therefore distinguishes between two, contrasting conceptions of critical thinking. One is *weak* and based on 'informal logic'; while in the other *strong* form of critical thinking, *substantial dispositions* are brought into play :

> One focuses on argument networks (world views); in place of conceiving of arguments as susceptible of atomic evaluation one takes a more dialectical/dialogical approach. In this 'real' world, whether that of 'ordinary' or 'philosophical' discourse, argument exchanges are means by which contesting point of view are brought into rational conflict, and in which fundamental lines of reasoning are 'refuted' by an individual charge of fallacy. (3)

Paul sees strong critical thinking as 'ultimately intrinsic to the character of the person' (5). His account is close to the principled charitableness favoured by Quine and Davidson in one's response to the arguments of others, and to Shemilt's (1984) account of empathy (see above). Paul asserts the importance of *reciprocity* in sympathetically entering into the world-view of one's opponent. One's sense of being a person will be enhanced by a *strong* form of critical thinking taught in this way. [38]

Such a view is consonant with the linguistic theory of Bahktin (1981), widely accepted by educationists, that interior dialogic thinking 'carries with it a mental act which requires the listener to understand the word from the speaker's point of view before approaching it from his own point of view' (Berrill 1990: 85). However, Paul's excessive reliance on 'error correction' and 'manipulation through Socratic method' in his general approach has been criticised as not being consonant with liberal criteria for hermeneutic enquiry, and may be therefore lacking in empathy (Gottesman 1997: 8).

15. A 'passion for critical thinking', values education, and transferability

A claim to be able to engender and assess a *passion for critical thinking* in a teaching program and system of assessment introduced state-wide for all Californian children is made by Facione and Facione (1992, Appendices 18, 19). They set out the cognitive skills and the dispositions which are to be sought universally, taught and assessed in all schools. [39] In their *Teaching and Testing the Passion for Critical Thinking* and their *Dispositions Inventory*, they claim that the dispositions of 'truth-seeking', 'analyticity', 'open-mindedness', 'systematicity', 'self confidence' and 'maturity' can be taught (Facione and Facione 1994). They distinguish their approach radically from other assessment tools, which 'tend to focus on cognitive skills' (Facione and Facione 1993: 20).

Voices also begin to be raised in favour of developing the dispositions within schools, colleges and vocational educational provision in the United Kingdom. Those considering the design of a *philosophy and pre-philosophical curriculum* become faced with the prospect of having to provide values education in response to a state requirement (Haydon 1997). The case for a full-blown programme of values and moral education in schools and colleges begins to be argued (Starratt 1994).

The argument for training transferable dispositions of character is made by those working in the UK with professional and older students in vocational education. Bridges (1994), for instance, asserts that thinking and *transferable* thinking skills are needed for any 'enterprise' curriculum relevant to both liberal and 'new vocational' educational aims. He wishes to develop *meta-competences* which enable one to select, adapt, adjust and apply one's other skills to different situations across different social contexts and cognitive domains. An empathetic disposition in the 'sensitive and intelligent discernment of similarities and differences between one society and another', and practical moral virtues such as 'confidence' or 'enterprise' should be sought (Bridges 1994: 13).

Winter (1994), working within the same tradition of the 'new vocationalism', also claims to develop *virtues of character* through the transferable teaching of thinking. He seeks to cultivate a repertoire of transferable, professional skills and character

virtues in health professionals, such as cheerfulness, compassion, empathy, resourcefulness and 'hegemonic awareness' which can be intellectually discussed and developed. [40] Benner (1984, 1994) makes a similar approach to good practice in public sector nursing education, and the critical thinking movement in the US also has strong links with the business sector (Senge 1994). A feminist and Aristotelian approach to the 'new vocationalism' in the education of dispositions, is also put forward by Assiter (1994) and Bryan and Assiter (1993, 1995). They argue the merits of craft guild approach to the development of 'thinking at work' (chapter 2). [41]

These substantial moral virtues of confidence and enterprise are very different from the intellectual virtues of correct, procedural etiquette in thinking with which critical and transferable thinking began as a social movement. Critical thinkers and those teaching philosophy to children can be seen as progressively replacing cognitive proceduralism, with a new, dual emphasis on *character training* and *meta-cognitive reflectiveness*. Carr's (1993: 15) view that moral education and 'our ideas of right are related - non-accidentally - to our ideas of character' can be seen as having concrete expression in the Californian experiment (Resnick 1987, 1989, Californian Department of Education 1992), and in moves in the UK towards a transferable 'thinking curriculum' featuring vocational dispositions.

16. Flexibility and ready-wittedness

It can be further argued that the notion of transferability involves the traits of flexibility and *ready-wittedness*. Newmann (1990) for social studies and Nicoll (1996) for early childhood education argue that critical thinking should engender *flexible dispositions*, such as curiosity and the offering of alternative solutions to problems. [42] Flexibility in this context can be seen as similar to Aristotle's virtue of ready-wittedness mentioned in chapter 4. Aristotle conceives *ready-wittedness*, the 'readiness to turn this way and that', as a virtue of social intercourse associated with pleasantness, virtue being a settled disposition of the mind (Aristotle, Nicomachean Ethics: 103).

Ready-wittedness is, however, to be seen as something more than an intellectual, moral virtue. Jonathan (1993) criticises Carr's (1991) account of dispositional morality for its inattention to the contingency in post-modern life, in effect asking for

'ready-wittedness'.[43] Counter-factual thinking combining affect and cognition in ready-wittedness, closely resembles Scheffler's cognitive emotion of 'surprise conceived as an intellectual process'. There is thus a broader conception of ready-wittedness in ethical and cognitive life which can be described as the aim of keeping all the possibilities of the world in play (Thornbury 1998). It will be recalled that perfection and plenitude were seen to be important attributes of the best of all possible ethical worlds in the various formulations of the *Great Chain of Being* (Lovejoy 1936, chapter 1). Ready-wittedness will involve flexible counter-factual thinking, narrative self-conception, imagination, metaphor and cross-domain conceptions, improvisation, and post-modern playfulness in the envisaging of an appropriate plenitude of moral possibility (Kekes 1993). One would expect it to be reflected in the utopian dimension of the curriculum (Walsh 1993) and in one's theory of moral imagination (Johnson 1993).[44]

17. Proceduralism also remains

How those concerned with philosophy with children and critical thinking progressively broadened the extent of their claims as providers of moral or ethical education has been identified and its progression traced.

The Aristotelian account of thinking as concerned with procedural intellectual virtues largely falls away in these new accounts. It seems that, once the genie of procedural dispositions is released into the world of critical thinking and philosophy with children, its metamorphosis into a pursuit of substantial virtue is inevitable. Modest interest in a disposition of persistence in critical thinking converts into a quest for major virtues. Notions of the person, character formation, authenticity, reflectiveness and autonomy consolidate into a 'grand narrative' for moral and values education. It is claimed, for example, that literary experience, and philosophical discussion of ideas about death, promotes virtuous behaviour in the world of dying children (Bluebond-Langner 1980: 98-100, Matthews 1994).

However, one tradition within the broad movement for critical thinking and philosophy with children continues to emphasise the procedural, Humean, or cognitive approach. Evidence that many philosophers persisted in taking the

procedural view can be seen in a collective definition of critical thinking gathered in 1990. Asked to define an 'ideal critical thinker', on the Delphi principle, of coming up with a definition without consulting others, American Philosophical Association (1990), members were conservatively inclined:

> The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. (2)

A procedural commitment to intellectual virtue and rationality rather than the teaching of major, moral virtues still predominates here. The same emphasis on proceduralism can be found in the widely-used critical thinking texts of Halpern (1997), Hughes (1996) and Groake et al (1997). Hughes, for example, sees critical thinking as based on three types of skills, the interpretative, the verificatory and reasoning skills (21). Dispositions are not mentioned but instead qualities of 'moral maturity, what we would expect a morally mature individual to exemplify' are sought. These are procedural, intellectual habits of mind, such as independence of judgement, justification by appeal to principles, generalisation of moral judgements, consistency, awareness of complexity and 'getting the facts straight', recognition of one's own fallibility, and tolerance (226).[45]

18. Democratic forms of life

Within such a changing climate of thought concerning the teaching of the dispositions, significant questions in the philosophy of education have now to be revisited. For when feelings, passions, the formation of character and of the person, rather than just correct procedural habits of thought, become prominent in one's teaching aims, there are major curricular and pedagogic implications. For instance, what is to be the place of values education, can the education of the dispositions ever be effective, is transfer possible? Should one be hesitant about the use of philosophy with children, and the teaching of dispositions and values education?

Newmann's (1990, 1993) broad aim in introducing the idea of dispositions and traits is the formation of *democratic character*. He wishes all students to be hegemonically prepared for democratic forms of life, including the economic, personal autonomy which is its pre-requisite. He therefore specifies disposition and qualities of character which are compatible with the democratic idea of teaching of higher order, critical thinking and philosophy to all, not just the cleverest children. This universalist approach is also found in the idea of the Institute for the Advancement of Philosophy of an increasing *global community of enquiry* (Splitter and Sharp 1995).

Democratic dispositions are also sought by other philosophers with broad educational concerns. Baier (1986) and Applebaum (1995) wish to see an atmosphere of trust in the classroom. Standish (1996) wishes to locate moral education within a communicative ethic which engenders 'emotional dispositions' along Habermassian principles. Macedo (1996) argues that the health of a liberal order, along the lines conceived by Adam Smith and others, requires civic education to produce individuals with the right dispositions and virtues, while respecting individual freedom. Cladis (1995) makes a link between dispositions and democracy in a flourishing liberal society, drawing on Durkheim's conception of public education balanced between communitarianism and liberalism. Gauthier (1993) claims that a sense of justice is a genuine, moral disposition which is central to all moral deliberation and evaluation. Chapman (1995), Bottery (1990), Chamberlin (1989) and Starratt (1994) each set out requirements for democratic dispositions in approaches which see the whole school as an institution modelling the social virtues (see chapter 7).

Some philosophers of education, although sympathetic, advise caution. John White (1990) advocates modest aims, such as the teaching of altruism as a system of dispositions concerned with attentiveness to the well-being of others, with an emphasis on arts education rather than moral codes. Patricia White (1989b) wishes to see 'courageous citizens'; and a new approach in the area of educational policy to the development of democratic dispositions, through moral and citizenship education in the schools.[46] She warns, however, against the tendency to see such teaching as unproblematic (89). It will require time for teachers to undertake such tasks, together with 'understanding of these issues and careful judgement about how to create a school and classroom environment in which democratic dispositions can be fostered'(89).[47]

It is not difficult to see that the quest for dispositions and virtues could all too easily convert into programmes of indoctrinatory and 'ideological' moral training. After all, disconcertingly often as chapters 1 and 2 demonstrated, the teaching of philosophical thinking has been used for undesirable ends. [48]

Various other implications arise for the broader *philosophy and pre-philosophical curriculum.* For example, the crucial relationship between thought and feeling in the formation of the dispositions, and in thinking itself, has been shown to be of central importance. The traditional dualism of our approach to teaching and learning in schools and colleges between 'scientific' and other thinking may need to be re-appraised (Mashaddi 1997a, 1997b). As Morgan (1998: 822-4) argues, for example, the fuzzy logic world-view in science, which has led to the impressive, complex systems in mathematical approximation and control engineering, can be seen as having roots more in Eastern philosophy than in 'bi-valent' Western thinking.

Any notion that the pre-philosophical curriculum within an over-arching National Curriculum can be taught either as 'just thinking skills', or as 'just character training', should therefore be eschewed. Transfer claims are notably difficult to demonstrate, as Witkin (1974) argues in relation to 'improving literature' in the arts curriculum. It is notoriously difficult to ensure that directly-taught moral education, or citizenship education, achieves the required results.

Educators will be engaged in the development of cognitive emotions *and* affective cognition as the pychological research on counter-factual thinking clearly illustrates. The pursuit of 'valued possibilities', in a phrase of Kekes (1993), will be seen as central to personal, ethical flourishing. This will involve having some conception of what those valued possibilities might be, in terms of one's obligations to both present and future generations (De-Shalit 1998). As chapter 4 and 5 have shown, that can occur when one engages in 'ready-witted' thoughtfulness about possible and more perfect worlds. Care, empathy, and charitableness in listening to the point of view of others, together with the development of the cognitive emotions and dispositions, will have an important place in the resulting philosophical and pre-philosophical curriculum. For this to happen, the school or college will need to arrive at an agreed *canon* and an *institutional policy,* a task which is explored in chapters 6 and 7.

Notes to chapter 5

1 *Connectionism* is the theoretical stance which informs parallel distributed processing and neural network modelling in computing and has promise as a framework for uniting clinical, psycho-analytical and cognitive psychology. Lloyd (1994) sees the *Freudian unconscious* within connectionist theory, as a set of complex dispositions embodied in connections between elements of conscious experience. Wit, as discussed below, is partly involuntary.

2 Felt (1996) argues against the usual conception of modally real possible worlds (as in Lewis), or the *world-story* or *world-book* worlds of Adams and Plantinga, all of which involve neo-Platonic metaphysics. He proposes an alternative metaphysical conception of the relationship of becoming to being within the virtues.

3 However, the contrasted terminology of 'moral philosophy' versus 'virtue ethics' is not employed here.

4 There is rarely reference in the psychological studies to the philosophical literature, or that of other subject disciplines. These studies, however, show dispositions in the process of formation and review; and they make clear the importance of self-constitutive narrative, memory and metacognitive reflection.

5 Here again the problem of the separation of disciplines, and the need to bring to bear an inter-disciplinary perspective is evident. Cognate work in other disciplines tends not to be mentioned. Thus counter-factual history does not feature in counter-factual psychological discussions. No links are made, for example, between Kuhnianism and *reference group theory* (Stouffer et al 1949), *relative deprivation theory* (Runciman 1966); or *attribution theory* (Eysenck and Keane 1995) in social psychology, sociology, and child development.

6 An example is given by Macrae et al (1993: 222). When counter-factual alternatives to an outcome were readily available, subjects 1. punished the perpetrators more severely; 2. considered the incident to be more serious; 3. felt greater sympathy towards the victim.

7 Some procedures within the judicial systems of the UK and the US allow jurors and judges can take greater account of the counter-factual perceptions of victims by means of an additional witness 'impact' statement.

8 These arguments for a more unified view of cognition and emotion have in fact an earlier provenance in psychology. De Sousa (in Rorty 1980: 284) draws attention to a 'little known paper' in which C. D. Broad suggested 'that emotions might be construed as cognitions.'

9 Eagleton (1983), on the other hand, describes the same position thus: 'In the early seventeenth century, when the absolute monarchy and the Anglican church still flourished, poets like John Donne and George Herbert (both conservative Anglicans) displayed a unity of sensibility, an easy fusion of thought and feeling. Language was in direct touch with sensory experience, the intellect was 'at the tip of the senses', and to have a thought was as physical as smelling a rose..From about Andrew Marvell onwards, then, it was downhill all the way. Somewhere in the seventeenth century, though Eliot is unsure of the precise date, a 'dissociation of sensibility' set in: thinking was no longer like smelling, language drifted loose from experience, and the upshot was the literary disasters of John Milton, who anaesthetised the English language into

an arid ritual' (38). However, Eagleton in my view, illustrates how much we have lost sympathy with the Aristotelian perspective.

10 In their emphasis on particularity, Kincheloe and Sternberg illustrate the hermeneutic claim, also variously advanced by others such as Nussbaum, Hawthorn, Gallagher or Atkins.

11 Hence mention of empathy by teachers of English literature is rare, and the notion does not appear as canonical in the assessment criteria for English in the National Curriculum (see chapter 6). See Medley (1988) on the concept of cause.

12 Quine (1990: 68) claims, in relation to belief ascriptions: 'Empathy is why we ascribe a propositional attitude by a content clause.' He argues that we feel our way in another's language and belief through trying to make sense, empathetically, of their projects and their cognitive position. Parents induct children into this process.

13 Davidson argues that radical interpretation has to be constrained by the principle of charity, so that massive error in one's belief system is not possible. According to Brueckner (1991) this either commits him to theism or begs the question against the sceptic. The problem can be solved by conceiving the omniscient interpreter as being in possession of perfect modal knowledge.

14 'For those starting points where considerations of agency rather than cause are at issue, what is more and less admissible is less easy to judge. This is because the line which divides the two lines at the point at which the agents in question would cease to recognise or to acknowledge themselves as the agents they were. Actual agents have dispositions and abilities, kinds of knowledge and states of mind which preclude their considering some alternatives for themselves, and thereby preclude us from considering those alternatives as alternatives for them' (Hawthorn 1991:166). Hawthorn errs on the side of cautiousness in arguing that we can better understand what happened knowing what might have happened. This must entail a more extended view of human agency than, in my view, Hawthorn is willing to give. An imaginative 'sympathetic re-enactment' historian, to use Collingwood's (1946) notion, can surely enlarge our historical understanding and should be encouraged to do so.

15 It is only history and the arts that appear to take an analytic interest in empathy. This is a striking example of thinking distinctive to an originating discipline or discourse which is, apparently, not susceptible to transfer (see again chapter 2). However, a prima facie case could be made out that empathy as a concept occurs just as much, if not under that name, in other subjects such as English.

16 See Cairns (1989: 13). So far as the cognitive benefits of teaching history through empathy are concerned, the verdict of Cairns is that 'until there is more research into the adolescent's perception, and effective ways of developing empathy within the whole curriculum, much of what is said about the teaching and assessment of empathy must remain tentative.' Jenkins and Brickley (1989: 22) argue that 'the empathy debate keeps crucial questions' on the agenda such as: What is history, what is its epistemological status, how far can we 'historically know' the past, how are history discourses produced, legitimated and related to power; who knows? It also keeps the question of ideology visible in such questions as whose history? what heritage? in whose interests? See also Ashby and Lee (1987), Low-Beer (1989), Natale (1972) and Portal (1990) concerning concepts of empathy and Dray (1980) on general questions of historiography.

17 Shemilt cautions: 'This is not to argue against an 'affective' component of historical empathy...but is rather to contend that affective empathy cannot be taught without degenerating into indoctrination'. One could argue that empathy has a major cognitive dimension, but also involves the feelings and dispositions. It could thus qualify as a 'cognitive emotion' with the criteria set out by Scheffler (1991). Dilthey's distinction between human understanding, which requires all one's mental powers and

is reflective (or metacognitive), and empathy which is pre-reflective would then need to be abandoned (Audi 1995: 219).

18 'In Barbara Tuchman's work as a historian it is clear that linguistic intelligence, though essential, would have been insufficient. In her reflections on history, we see the importance of interpersonal intelligence in interpreting the often conflicting written records' (Maclure 1991: 161).

19 'Our Anglo-American philosophical tradition has tended to assume that the ethical text should, in the process of inquiry, converse with the intellect alone; it should not make its appeal to the emotions, feelings, and sensory responses. Plato explicitly argues that ethical learning must proceed by separating the intellect from our other merely human parts; many other writers proceed on this assumption, with or without sharing Plato's intellectualistic ethical conception. The conversation we have with a work of tragic poetry is not like this' (Nussbaum 1986: 15).

20 'We can say...that a whole tragic drama, unlike a schematic philosophical example making use of a similar story, is capable of tracing the history of a complex pattern of deliberation, showing its roots in a way of life and looking forward to its consequence in that life. As it does all of this, it lays open to view the complexity, the indeterminacy, the sheer difficulty of human deliberation' (Nussbaum 1986: 14).

21 See again chapter 3. It may have a fictional element, or it could take the form of a literal historical reconstruction. This is what seems to occur in the case of new forms of legal discourse. Ryan's taxonomy offers a method of classifying these elements (see below).

22 'It would be very difficult to construct a philosophy programme for children without a moral education component, since questions of value are so frequently encountered in other aspects of philosophy and are of such importance to children...philosophy without ethics cannot be readily taught' (Lipman and Sharp 1978a: 89-90).

23 'Students must not only be encouraged to express their beliefs as to what they consider important, but to discuss and analyse them, considering the reasons for and against holding them, until they can arrive at reflective value judgements which are more firmly founded and defensible than their original preferences may have been. Such enquiry necessarily will involve students in examining the criteria employed in favouring one value over another' (Lipman and Sharp 1978a: 89).

24 Ennis (1994), *personal communication.*

25 They will have the following dispositions. They will: 'Care that their beliefs be true, and that their decisions be justified; this is a care to 'get it right' to the extent possible. This includes the inter-related dispositions to: Seek alternatives (hypotheses, explanations, conclusions, plans, sources), and be open to them; Endorse a position to the extent that, but only to the extent that, it is justified by the information that is available; Be well-informed; and Consider seriously other points of view than their own. Represent a position honestly and clearly, theirs as well as others'. This includes the dispositions to: Be clear about the intended meaning of what is said, written, or otherwise communicated, seeking as much precision as the situation requires; Determine, and maintain focus on, the conclusion or question; Seek and offer reasons; Take into account the total situation; and Be reflectively aware of their own basic beliefs. Care about the dignity and worth of every person. This includes the dispositions to: Discover and listen to others view and reasons; Avoid intimidating or confusing others with their critical thinking prowess, taking into account others feelings and level of understanding; and Be concerned about others' welfare' (Ennis 1995). This account of the dispositions was presented in August 1994 at the *Sixth International Conference on Thinking,* MIT, Cambridge Ma. and revised for the University of East Anglia Conference on Critical Thinking, April 1995.

26 'Thoughtfulness thereby involves attitudes, personality or character traits, general values and beliefs or epistemologies about the nature of knowledge (e.g. that rationality is desirable; that knowledge itself is socially constructed, subject to revision and often indeterminate; and that thinking can lead to the understanding and solution of problems) ...without dispositions of thoughtfulness, content and skills can be taught and applied mechanistically and nonsensically. Thus, thoughtfulness must also be reinforced in the curriculum as a necessary, though not sufficient, condition for higher order thinking' (47). At best, much classroom activity fails to challenge students to use their minds in *any* valuable way; at worst, much classroom activity is nonsensical or mindless. *The more serious problem, therefore, is not the failure to teach some specific aspect of thinking, but the profound absence of thoughtfulness in US classrooms.* A more general conception of thinking can address the problem that even programmes designed to teach thinking skills can fail to promote *thoughtfulness.*' (Newmann 1990: 44, author's italics). Newmann suggests that programmes consistent with this emphasis include those described by Lipman et al (1980).

27 Newmann (1990: 47). See also Cornbleth (1985), Norris (1985), and Schrag (1987, 1988) for a similar approach.

28 'The truth is that in genuine circumstances of moral dilemma there is, more often than not, no right solution and it is simply up to us to do the best we can in the light of what we are able to recognise as most honest, decent, kind or courageous' (Carr 1993: 16). Jonathan (1993), however, feels that Carr's (1991) general account of the virtues takes insufficient account of the volatile conditions of particularity and contingency, which operating within 'modernity', provide extra possibilities for the formation of dispositions.

29 It is this model of 'enlightenment male rationality' which Assiter (1994), Haynes (1991), Thayer-Bacon (1992, 1993) and others wish to criticise. Siegel's assumption that there is one form of rationality rather than 'competing rationalities', and the view that rationality exists without historical location is also unacceptable to hermeneuticists (Atkins 1988).

30 The distinction between higher order and lower order thinking was discussed in chapter 1. Newmann (1993: 8-12) makes use of the distinction, but most other writers do not. The Barrett taxonomy (Appendix 9) gives an idea, in its first two categories of reading comprehension, of what might be involved.

31 Reported in McGuinness and Nisbet (1991: 181-2). The implied need for reflexivity is not identified.

32 The authors, who are psychologists, do not discuss the philosophical literature.

33 Conley (1993: 1). See the fuller discussion of the problem of 'ironism' as faced by teachers in chapter 8. Rorty wishes to avoid 'ironism' being taken up by others than philosophers.

34 See Shemilt (1988: 78). Chapter 4 showed how such an emphasis links with recent developments in counter-factual thinking in the disciplines of history, philosophy, and psychology. See also Appendix 21. Empathy remains a contested concept among historians: 'Until there is more research into the adolescent's perception, and effective ways of developing empathy within the whole curriculum, much of what is said about the teaching and assessment of empathy must remain tentative' (Cairns 1989: 17). Nevertheless, it seems that most historians in schools or colleges would be in favour of some empathetic teaching.

35 However, Donaldson (1979), Meadows (1982), Levine (1983) and critics of CASE have robustly challenged aspects of Piagetian theory. The debate is one which the individual teacher must address with colleagues when approaching the whole school or college policy, as a 'contested' area, with arguments on both sides.

Concerning the general question of introducing philosophy, it is not advisable or desirable to pursue technical philosophy with most students (although there will be precocious exceptions) before the age of 16 years (the commencement of the A level course). Philosophy teaching, in that form, requires sustained teaching and performance in *philosophising*. The point at which this can be undertaken, Kitchener (1990) and the post-Piagetians argue, does not arise before mid-adolescence. Their case is underlined by the lack of early virtuosity among philosophers, compared with youthful genius and precocity often found in mathematicians. Nevertheless, a pre-philosophical curriculum can meet some of the criteria of philosophy teaching. Evidence of early pre-philosophical 'cognitive emotions' among those who have later become philosophers shows that some students need early help.

36 Psychologists claim that these illusions confer advantages in certain circumstances. Exaggerated beliefs in control and unrealistic optimism are associated with higher motivation and greater persistence in situations of objectively poor probabilities of success.

37 This point was explained briefly in chapter 2.

38 'To teach critical thinking in the strong sense is to help the student to develop reasoning skills precisely in those areas where he is most likely to have egocentric and socio-centric biases. Such biases exist most profoundly in the area of his identity and vested interests. His identity and interests are linked in turn to his unarticulated and articulated world view(s). His un-articulated world view represents the person that he is (the view implicit in the principles he uses in guiding his action). His articulated view represents the person that he *thinks* he is (the view implicit in the principles he uses in *justifying* his action)' (Paul 1982: 5).

39 For philosophical discussion of 'passion' in relation to the emotions see Solomon (1993) and Facione and Facione (1992: 2). Emphasis on tolerant pluralism while pursuing rational passions and character virtues of liberal education could be seen here as part of the US national debate - for instance, between the evangelical and the liberal establishments.

40 This is *values education* with ambitious specifications. For example, hegemonic reflectiveness is sought in which there is 'awareness of the need to counteract one's own tendency (both as a person and as a professional worker endowed with specific powers) to behave oppressively' (Winter 1992: 109).

41 See again chapter 2.

42 Newmann (1990: 47), Cornbleth (1985), Norris (1985), and Schrag (1987, 1988) all of whom have a similar approach.

43 Jonathan (1993: 115-124) argues that any contemporary account of the dispositions needs to give prominence to particularity and contingency in a way which is dialectical between the individual and society.

44 Possibilities may be *ideal* - as in the case of architecture (Jencks and Kopf 1997, Tafuri 1976), or *satiric* and *ambiguous* (Rees 1996: 3). They may be feminist, domestic, political, scientific, based on the 'oriental' or 'philosophical tale' (241), or peculiarly nationalistic (Morton 1969). They are close in conception to the medieval pre-occupation with plenitude, perfection and the marvellous, with the city as a perfect civilisation, with islands and deserts, or the Occident as perfect locations; and with Never-Never Land, the moral location of the *refrigerium interim* and Purgatory, the Golden Age and Paradise Regained and even oenirology (Le Goff 1985). Le Goff describes a catalogue of possible worlds of the Marvellous in the Medieval West (34-40). Thomas (1971) shows how utopianism flourished in relation to magic and alchemy (271). Clark (1995) shows how ethical and other philosophical topics are extensively explored in utopias in science. Both Thomas and Le Goff demonstrate the progressive christianisation of witchcraft and other beliefs. Thomas shows that many

philosophers and intellectuals held firm beliefs in actualist possible worlds in which astrological supervenience, prophecy, alchemy, white witchcraft and worlds in which witches could be punished, and crime detection through oneirology all feature. The dilemma is presented: should one welcome emancipated thinking about a plenitude of valued possible worlds, some of which will be very far-off rather than close? Or should one beware the pitfalls of inauthentic glibness, febrile wit and ultimately unfounded speculation, and instead develop an advanced sense of irony?

45 Hughes'(1996) textbook attempts to integrate critical thinking approaches with discussion of key questions in the philosophy of language and in epistemology. Halpern (1997) offers as the core skills of critical thinking across the curriculum: 'determining cause; assessing likelihood and uncertainty; comprehending complex text; solving novel problems; making good decisions; evaluating claims and evidence; and thinking creatively'.

46 See also White's (1983) *Beyond Domination* for a depiction of schools which could accommodate the notions of both 'classroom thoughtfulness' and the 'community of inquiry'.

47 'Teachers need time to reflect on these issues and the delicate matter of applying them to the educational situations in which they find themselves' (White 1996: 89).

48 See again chapter 2 for arguments concerning the hegemonic use of philosophy teaching. We should perhaps be especially wary of implementing a political or governmental curriculum for such purposes but the pursuit of a 'plurality of valued possibilities' as urged by Kekes (1993: 26) could be a suitable aim. As De-Shalit (1998: 819) reminds us, there is also the question of our obligation to *future generations* in any notion of a community of philosophical enquiry: 'obligations rest on a sense of community which extends into the future.'

CHAPTER 6

The canonical curriculum: specialist philosophy and the National Curriculum.

1. The question of a philosophical canon

If whatever is discovered by the transcendental realist becomes provisional dogma, the temporary agreed reality, to what extent should it be allowed to carry canonical status as a body of discourse or knowledge which can be taught to others? In chapter 3, it was argued that Bhaskar's account of transcendental realism led towards a demand for pedagogy. The style of teaching, in which transcendental modal realism was to be translated into classroom practice, was to feature an unremitting drive towards exploring *possibility*, requiring a full repertoire of interventionist approaches on the part of the teacher. It would involve the teaching of social practices and forms of discourse or knowledge over which there was contestedness. However, despite these circumstances of curriculum territoriality, contestedness and pluralism, the distillation of a *pre-philosophical and philosophy curriculum* could be achieved.

This chapter examines the notion of the canonical, first as seen within the subject by philosophers themselves, and then in relation to the teaching of philosophy, pre-philosophy and critical thinking. It looks in turn at: philosophy teaching in France, philosophy for children in the US, the A level in philosophy, the *National Curriculum for England and Wales,* and the concept of an *inferred canon.*

The question of whether there could be a canon of literary philosophical works which all could agree upon, as a basis for teaching in a plural society, has been of great interest to public intellectuals (Bloom 1994, Brann 1993). The literary canon can, for example, be seen as aesthetic experience processed by life-time memory (Bloom: 39). [1] Pragmatically, 'what is the canon?' is the question addressed by an examination board in considering the principles of selection for a syllabus, say in A level Philosophy. The same question, asked in relation to an entire philosophy and *pre-philosophical curriculum* which is compulsory or prescribed, turns into an exercise of political as well as educational power.

For Rorty (1984) the 'canonical' embraces a larger question: what is to be the place of the history of philosophy when we are deciding how or what philosophy is to be taught? Discussion by Rorty of what might constitute a philosophical *canon*, when taken together with other sources, leads to a deeper reading of what might be involved in a larger national or compulsory curriculum for pre-philosophy and the teaching of philosophy. [2] Rorty wishes to revive interest in the view that careful and scholarly attention should be given to the history of philosophy and the notion of a canon, or canons, of key texts, ideas and philosophers. In *Philosophy and History* (1984) he urges:

> The more intellectual history we can get, of the kind which does not worry about what questions are philosophical and who counts as a philosopher, the better our chances of having a suitably large list of candidates for a canon. The more various the canons we adopt - the more competing Geistesgeschichten we have at hand - the more likely we are to reconstruct, first rationally and then historically, interesting thinkers. (74)

He suggests that we can discern *four genres* in the treatment of the history of philosophy. Firstly, there are *rational reconstructions* of the arguments of dead philosophers, necessary to help present day philosophers think through problems. These might be in the form of possibilia, for instance conversations with the 're-

educated dead' answering questions like 'what would Locke have said about, say, labour unions or Rawls on justice?' (51). Secondly, there are *historical reconstructions* of 'what unre-educated dead thinkers would have said to their contemporaries'. For example, if the question is what Locke would be likely to have said to a Hobbes who had lived and retained his faculties for a few more decades, there is no reason why historians should not arrive at a consensus (53). [3] Rorty's categories of rational and historical re-construction envisage guidelines and rules for proceeding in these two different cases of historical thinking about 'what if?' events.

Thirdly, there is *Geistesgeschichte* in canon formation: the idea that some one can count as a great, dead philosopher who identifies problems in such a way as 'to justify our belief that we are better off than those ancestors by virtue of having become aware of those problems'. Here, Rorty suggests, we should also ensure the inclusion of *edifying philosophers*. These are philosophers who may have made no major, original contribution to the corpus of philosophical thought but who can be held to have performed a particular role which is worth recording, or have contributed to the dissemination of a technique (1984: 56). [4]

A fourth genre, *doxography*, Rorty wishes to discard; replacing it with the term 'intellectual history' for a much more diffuse and rich genre which does not fit into the above categories (1984: 68). [5] Within this area, it becomes much less important that a thinker is called, formally, a philosopher. The question, for instance, of whether Weber was a sociologist or a philosopher, or Arnold a literary critic or a philosopher, are matters to be settled after we have written our intellectual history rather than before.

Kress (1994), working in linguistics and English studies, makes a different set of distinctions. He wishes to define the idea of a canon in terms of three categories of text: the *aesthetically valued* - and valuable text, the *culturally salient* text, and the *mundane* text.

> The culturally salient text is not measured by the criteria of the aesthetically valued text - even in the culture in which it originates. It is measured against criteria of *significance*: what significance does this text have in its own cultural domain: what significance does it have therefore for members of cultural groups in this multi-cultural society? What are the features and characteristics which give it salience in its culture of origin and therefore lend

> it particular force and significance as a means of understanding a cultural group in the society of which it is a part? Aesthetically valuable texts may be among these: but that is not a relevant or telling criteria (sic) from that point of view. (103)

Parallels can be seen between Kress's first two categories of text and the distinguishing characteristics of texts within a philosophical canon and tradition (Lang 1990: 232). [6] For instance, Rorty's notion of the 'edifying' text resembles the 'aesthetically valuable' one proposed by Kress.

In *After Virtue: A Study in Moral Theory,* MacIntyre (1981: 205) argues a somewhat similar case to that of Rorty, Kress or Hirst; that any canon inevitably, and desirably must be derived from a public tradition of social practices. His particular argument, as described already in chapter 3, claims that one inherits a specific past which is active in one's present; and that this makes one the bearer, and transmitter, of practices which have histories and *traditions*. MacIntyre, furthermore, allocates an important place to the dispositions; since they sustain the relationships required for practices within the larger social traditions, through which particular practices are transmitted and reshaped.

Implications arise here for the role of the individual teacher of philosophy and pre-philosophical thinking which link with the discussion of the importance of the dispositions (chapter 5). The hermeneutic claim can, for instance, be discerned when Kress speaks of the 'culturally salient' text which has significance in its cultural domain; and in the idea, present in the work of MacIntyre, Nussbaum, Gadamer and Rorty, that one philosophises out of a singular location in space, time and tradition:

> Within a tradition the pursuit of goods extends through generations, sometimes through many generations. Hence the individual's search for his or her good is generally and characteristically conducted within a context defined by those traditions of which the individual's life is a part, and this is true both of those goods which are internal to practices and of the goods of a single life. (MacIntyre 1981: 206)

That such a philosophical canon can vary widely even within the lifetime of a philosopher, is evident in the very great differences between major dictionaries of philosophy and their subsequent revisions, or editions, as Monk (1998: 25-6) spells out (see also Borchert 1996, Craig 1998, Edwards 1967).

2. A curriculum canon

Suggestions for a canonical approach to the curriculum, and particularly forms of knowledge or practice in relation to it, have arisen frequently within the field of the philosophy of education. Hirst (1974, 1983, 1993), Phenix (1964), White (1973, 1982, 1990) and others have claimed that a 'canonical' epistemology can be discovered in, or should under-pin our curriculum arrangements.

White and White (1985), for instance, suggest classifying the teacher education curriculum, and particularly in relation to INSET (inservice education and training) in terms of the main, traditional areas of philosophical investigation. They propose an approach which, taking the curriculum as a given, involves systematic mapping and analysis of that curriculum, its core and foundation subjects, attainment targets, schemes of work, and task assessments, in terms of their philosophical content and assumptions (40-47).

The chief interest of the schema they offer is that, although designed for teacher education, it identifies the various areas of the 'transcendental' curriculum and pedagogy which might be covered. It begins with a range of *epistemological* beliefs which would be covered, including the provisionality of belief itself. There would be considerable emphasis on the procedures for thinking - analysing, synthesising, distinguishing, predicting, hypothesising, judging, reasoning, and persuading. *Social* beliefs such as the possibilities of negotiation and consensus would be covered, as would *psychological* beliefs concerning the nature of awe, wonder, mystery and feelings of transcendence. *Political* beliefs are less prominent, although there is reference to consensus, negotiation and agreeing to differ. *Ethical* beliefs about the cultural relativity or objectivity of values, or priorities in human well-being, including the response to ethical dilemmas and scientific controversies, are fairly prominently covered. The need for a personal interest in *metaphysics*, for instance in cosmogony in relation to religious education, is specifically mentioned together with 'hypothesis' in its more metaphysical sense. To these would need to be added, in my view, the *aesthetic domain* and its associated ideas.

This approach could also accommodate variations between subject disciplines such as those identified by Donald (1992). She asked an international panel of professors to identify the 'epistemological status of one's own discipline' by prioritising the order

of six thinking processes or metacognitive variables (Appendix 29). Disciplines varied in the kinds of thinking to which they gave most prominence, thus supporting the Kuhnian (1970) thesis that particular paradigms or canonical perspectives achieve dominance among communities of scholars through processes which are both sociological and subject-related.

3. Selection is inevitable

There has to be selection for a canon to be formed, although the approach to this task may vary according to whether we are acting as philosophers or curriculum designers. Selection is inevitable, and takes place de facto, in any practical preparation of a course for school or college students, through the selection of texts to be studied. The problem of selecting a canon of approved works in teaching philosophy often proves, however, to be a complex and exacting task. [7] Agreement on criteria is difficult to achieve, and the epistemological frameworks described above give only general guidance.

Taking up Rorty's account of the ingredients for a philosophical canon, for instance, is the main task for A level philosophy to be the selecting of historically significant philosophers whose work has some contemporary relevance; or philosophers who have tackled important topics; or those who, like Hume, Ayer or Russell, write with edifying lucidity? As MacIntyre, Brann (1993) and others point out, a pluralist Western society will have different and sometimes competing views on the definitions and criteria to be used. [8] Should criteria of balance, celebrity, past influence, quality of writing or its difficulty be adopted in compiling a canonical list of texts? What should be the particular contribution of medieval, Buddhist, women, or black philosophers (Gill 1992, McGary 1984)? [9] Should contemporaneity, relevance or the quality of writing be accorded more importance than other criteria? Who is to set the standard of rationality: should it be the examining body or eminent philosophers? What should be the influence of universities and examination boards? Should syllabuses reflect, for example, the renewed interest and catholicity of university courses in changing their attitudes towards Continental European philosophy? [10]

Similar arguments apply to the sub-domains of philosophy for children, transferable and critical thinking, which were shown in chapter 2 to be part of a fissiparous social movement. How are the 'contested' claims of interested parties to be taken account of? To what extent should pedagogic, linguistic or educational theories, as described in earlier chapters, bear on the process of selection? [11] What significance should be attached to the 'ideological' critiques of Haynes (1991), Thayer-Bacon (1992, 1993), and Weinstein (1993a, 1993b) who criticise the philosophical assumptions of the critical thinking movement, as being based on post-Enlightenment rationality?

How these questions are answered will vary widely, as can be seen in case study examples taken from the three different national settings of France, the United States of America and the United Kingdom.

4. The case of France

Much can be learned from the historical evidence, as Rorty argues, about the nature of the philosophical canon; and especially from the curriculum traditions of nation states and their cultures. The notion of the canon offers a procedure for what Lawton (1973, 1983, 1989) calls 'making selections from the culture'. [12] Even if one does not take a narrowly transmissionist view of curriculum, it is evident that both in its elitist or democratic modes, the teaching of philosophy can be seen to be concerned with power relations in any given society. In that sense, arrangements for the teaching of philosophy (and notions of critical thinking) are susceptible to a political, 'critical theory' or Marxist interpretation, as discussed in chapter 2.

The history of philosophy teaching in France shows how a canon can emerge which relates to the training and selection of elites, thus raising the sociological question of the relationship between philosophical education, hegemony and power (Montefiore 1983). Howard (1994), indeed argues that the teaching of philosophy in high school, the 'classe terminale', has been a crucial factor in shaping what is unique about the *public intellectual tradition* in France. Philosophy in schools in France was originally taught by the Jesuits. But after their colleges were closed down in 1762, control was assumed by the universities, who took over the training of teachers in addition to their existing direction of the Baccalaureate examinations. There was thus always a connection between secondary school philosophy and the universities, and

close attention to the notion of a canon since all teachers of philosophy were involved in the development of the subject.

Curriculum re-organisation in France under the Napoleonic Code led to the detailed specification of a philosophy syllabus (Griffiths 1979). An emphasis on independent thinking did not mean the neglect of a nominated canon of philosophical texts which included edifying texts and the history of philosophy. The compulsory element of philosophy within the final year of the Baccalaureate course featured a list of topics designated by the Minister of Education. Suggestions on teaching methods were issued in the 1970's by the Ministry, when the need was emphasised for teachers to develop an individual approach, engaging in dialogue with the students while drawing on the academic authority of textbooks.

5. Philosophy for Children in the US

Lipman and colleagues at the *Institute for the Advancement of Philosophy with Children* (IAPC) in the United States have pursued a quite different view of the canon. It is one which affects to be ahistorical but which, nevertheless, arises from a particular, Anglo-Saxon tradition in the teaching of linguistic philosophy. [13] For example, the advocates of philosophy for children place emphasis on oral philosophising and eschew mention of the names or ideas of particular philosophers when working with school age students. The training of teachers in the IAPC programmes, and the programmes themselves, place great emphasis on avoiding what Rorty calls the pitfall of *doxography*, studying a list of 'philosophers of the past'. The IAPC philosophers therefore assert a formal separation, through their pedagogic practice, between the pre-philosophical curriculum and the more academic or technical study of philosophy.

Lipman and his colleagues have been anxious, however, to enlist the support of great philosophers of the past, in seeking canonical justification for their practice, as adumbrated in chapter 2. Lipman and Sharpe (1978b) argue that there are historical anticipations of philosophical thinking among children, drawing attention to the work of particular philosophers Locke, Vico, Pestalozzi, Tolstoy, Groethuysen, Jaspers and Dewey - as supporting their arguments for the teaching of the subject. For

example, they cite Locke's advice that we should treat the child as a rational creature in teaching matters 'level to their thoughts', and appropriate to the age and inclinations of particular children, which engage them in practices that involve reasoning behaviour.

Vico's argument that children can develop their logical powers through re-enactment of their experience of the world is adduced as evidence. Pestalozzi's advice is called upon that the child needs to be made to think as 'an agent in intellectual education'. Evidence of philosophical apprehension in the childhoods of philosophers such as Sartre and Tolstoy is brought forward, as part of a case for teaching the subject from an early age. Jaspers' essentialist claim that children's interest in philosophy is innate is cited, together with Dewey's argument that 'all thinking is original' and his stress on the need to stimulate its practice frequently (Lipman and Sharp 1978b). [14]

6. A level Philosophy in the UK

Whatever the state of the contemporary philosophical debate about the notion, revival and adoption of a philosophical canon, those about to commence teaching philosophy as a separate subject in schools or colleges in England and Wales in 1986, found themselves designing syllabi and setting examinations; and thereby *force majeure* proposing a philosophical canon (Ward 1983). The inception of the A level in England and Wales was a phenomenon of professional interest among philosophers and educationists, and among the general public. Claims for and counter-arguments against teaching the subject were professionally aired in subject journals and, more controversially, in the popular press.

The debate provided a unusual opportunity for philosophers to act as a *public intellectuals* concerned with education policy (see chapter 8). Much was revealed about what various protagonists considered to be appropriate claims concerning the philosophical canon. [15] The issue of which works were to be studied was discussed by the professional, philosophical community. What was to be included and what left out? By what method of teaching would candidates and their teachers proceed? These questions were solved in the event by getting down to the job of designing an examination course, when a curriculum emerged as described in chapter 3, responding to professional circumstances rather than some larger intellectual debate. Any notion

of a philosophical canon as in the account developed by Rorty was more implicit than publicly discussed, even in the professional literature. However, the philosophical canon which emerged did in fact reflect the categories offered by Rorty, Kress or MacIntyre.

The aims of the Associated Examining Board syllabus, the more widely adopted of the two syllabuses on offer, were for instance stated as being: to enable the student to gain an understanding of some important philosophical ideas, their historical development and their present-day relevance; and to strengthen the capacity of students for analysis, reasoning and judgement, and their ability to express themselves in these modes. The AEB Syllabus consisted of two parts. One part concentrated on the history of philosophy; and the other part covered various philosophical themes. The syllabus indicated not only the desirability, but also the difficulties in selecting a canon from which to teach. [16] It used texts qua texts *and* specified the study of particular philosophers. [17] Emphasis was placed on the selection of texts and philosophers congenial to the professional stance of the ordinary language or linguistic philosopher. No 'great philosophers' were presented as such; although in general the selected texts promoted 'great thinkers' in the European and Anglo-Saxon linguistic tradition. In reviewing the proposal from the Associated Examining Board for an A level course, Ward (1983) pointed out that the study of the history of philosophy was being justified in the way the A level had been developed. The examining body had drawn up a well thought-out A level philosophy syllabus that encouraged a critical awareness of the work of a few famous philosophers of the past, and 'the ability to discuss some of the problems faced by recent and contemporary philosophers', and had thus met the twin aims of the syllabus (254). [18]

7. The National Curriculum of England and Wales

The third case study addresses the question, in rather more detail: To what extent has the *National Curriculum for England and Wales* dealt with, or conceptualised the issue of a canon? Is a canonical pre-philosophical curriculum highly visible, or a 'hidden' curriculum and invisible pedagogy presented, within the structure of the National Curriculum, its curriculum orders, circulars and guidelines? Teachers wanting to introduce a whole school policy on philosophy, pre-philosophy and higher order

thinking would want, on the argument of chapter 3, to answer such questions by scrutinising the philosophical claims and assumptions to be found in the National Curriculum documentation.

Some philosophers have taken a favourable view of the opportunities for philosophical education which would be offered by the introduction of a National Curriculum. Macdonald (1988), for instance, argued that such a curriculum could be interpreted as being sympathetic towards philosophical concerns.

Other philosophers of education have evinced an especial interest in the ethical or 'values' dimension of a prescribed state curriculum. Haydon (1990, 1997) wishes to approach philosophical issues in ethics and values education within the context of the National Curriculum. He offers a selection of representative, 'values' teaching prescriptions from the National Curriculum, including such statements as that pupils should: 'discuss moral values and explore those held by different cultures and groups', 'be taught to...use factual information and value judgements'; 'be taught to recognise potential conflicts between the needs of individuals and society'; and to have 'concern for human rights'. Haydon argues the largely proceduralist stance, that:

> Learning how to wrestle with value judgements, how to prioritise, compromise and, hopefully, resolve value conflicts is central.. it benefits from the skills of using language to negotiate with other, to elicit what lies behind conflicting points of view and to achieve co-ordination of and consensus on practical action. (1990: 2) [19]

Value issues should be explored in a way which is not compartmentalised by subject matter. A unified tradition of discourse within which the rational settlement of value claims is not needed, but there should be a language of discussion which is sufficiently differentiated and precise to make the exploration of values more than a mere comparison of feelings on specific issues. [20] Myerson (1994) argues for a concept of *dialogic rationality* along rather similar lines; and others provide curriculum resources which might do this (McCulloch and Mathieson 1995).

8. A cross-curricular entitlement

Craft (1991) puts forward the case for a canonical 'entitlement' curriculum of thinking skills within the National Curriculum framework. Craft shares the view of those philosophers who claim that it is only in the area of thematic concepts that 'philosophy meets literature' and other subjects (Olsen 1984). A general thinking, argument, or pre-philosophical curriculum cannot simply be assembled by the ad hoc adoption of the individual insights, methods and favoured procedures of each subject discipline. A broader account of 'thinking about thinking', or 'thinking or arguing' pre-philosophically in the general curriculum will be necessary. [21]

Craft argues that the National Curriculum innovation offers a chance to introduce an *entitlement curriculum* in thinking skills through its cross-curricular skills, themes and dimensions (Appendix 33).

> The whole curriculum in English schools, as defined by the National Curriculum Council, which comprises the subjects of the statutory curriculum, the five named cross-curricular themes, cross-curricular skills and cross-curricular dimensions, can be seen as an entitlement curriculum. (1991: 183)

She also sees an important place for thinking within the subject areas:

> Identifying named thinking skills in the core and foundation subjects and relating these to an agreed whole school policy in skill development is therefore a first step in teaching children to learn to think. For primary teachers this means being aware of what skills are appropriate to each subject in the curriculum. How is thinking in geography different from that in English or technology? For secondary teachers, it means subject specialists exploring thinking skills in their own subjects and sharing knowledge with specialists in other subjects. (196)

The circumstances in which a 'welfare right' of a curriculum entitlement to be taught *philosophy and a pre-philosophical curriculum* might arise from a combination of strong claims was identified at the conclusion of chapter 2. Despite having a somewhat restricted perspective in its emphasis on thinking skills, Craft's argument for a whole school or college approach provides a persuasive foundation for the case of that 'welfare right'. [22]

9. The subject context

Accounts by critical thinkers, like McPeck (1981), who claim that any canon of good thinking will be domain and subject-specific can be seen as compatible with the claims of Nussbaum in literary hermeneutics (1986), and of Atkins (1998) or Leinhardt (1993) in curriculum theory and pedagogy. For McPeck (1981, 1990), it will be recalled from chapter 2, it was a matter of conceptual truth that thinking could never be about 'everything in general' but was always about something in particular.[23] The language of the disciplines provides a very powerful set of analytic lenses through which students can come to understand problems, as McPeck (1990) asserts:

> Since critical thinking is, in my view, parasitic upon the disciplines, it follows that you should not introduce it until students know something about the disciplines. Anything worthy of the name 'critical thinking' cannot exist in a subject vacuum. (McPeck 1990: 43)

Siegel (1988) argues for the teaching of philosophical content within the subject disciplines as one goes along.

> In history, literature, mathematics, and so on, familiarity with the philosophy of that subject may reasonably be expected to enhance students' critical thinking in that subject, since the philosophies of the subjects all take as part of their domain the proper analysis of reasons in that subject. (114)

These arguments of cognitive proceduralism do not address the affective dimension, however. Hermeneutic and neo-Aristotelian accounts, which suggest that thought and feeling may not in fact be separate epistemological or ontological categories offer a more complete account. Nussbaum (1986, 1988), for instance, offers a refined, canonical case for thinking occurring in subject domains. The specificity of context found in subject teaching is essential where thought, feeling and understanding are to combine in the formation of dispositions (see again chapters 3 and 5).

10. The 'inferred' canon and the National Curriculum

One method of approach to the construction of a philosophy and pre-philosophical curriculum is therefore to identify the *inferred canon* of assumptions, pedagogy and content which pervade an existing curriculum. This is to put into practical operation the transcendental claim made in chapters 2 and 3. Taxonomies of description or assessment often reflect the canonical criteria to which those in a given field are working, and can thus be used to infer the canon itself (see Appendices 8, 9,11, 14, 21, and 29). The inferred canon can scrutinised for its consistency and internal coherence; although it is worth re-stating the point that there will always be canonical plurality in a democratic society (see again chapter 2).

An attempt to construct an *inferred canon* for the pre-philosophical curriculum to be found within the National Curriculum was undertaken for the purposes of this study. The method involved scrutiny of a range of statements and assumptions concerning levels and criteria for assessment in thinking, found in the *Consultative Proposals of the School Curriculum and Assessment Authority on the National Curriculum for England* (1994, Appendix 17). [24] The criteria for assessing thinking, argument, or philosophical coverage within each of eight subject areas were classified in four categories (Thornbury 1995b, Appendix 17).

The *Consultative Proposals* put forward amendments to the existing assessment of the National Curriculum. The *Proposals* covered every subject in the curriculum. The documents were prepared by a series of separate committees and co-ordination of effort and approach was claimed. These were examined together with a model syllabus and targets for Religious Education, a subject not formally included in the National Curriculum. A revealing picture of the current national state of 'thinking about thinking' subsequently emerged. The vocabulary used and the ideas which recur provide a picture of the received opinion of the time among the subject specialists. Their diversity reveals the disparate assumptions, as well as continuities, concerning thinking within different subject traditions which Donald's (1985, 1988, 1992) research suggested are likely to occur.

11. Results of the analysis

The English criteria came nearest to setting out a coherent teaching programme which would move students towards the levels of thinking argued by Kitchener (1990) as pre-requisite to the formal study of philosophy. The English rubric mixed a high level of generality with pragmatic prescription. For instance, in specifying how intellectual enquiry and thinking were to be assessed, students were to:

> Take different views into account, sift, summarise and use salient points, cite evidence and construct persuasive argument. In taking different roles in group discussion pupils should where appropriate, negotiate consensus or agree to differ... be taught to identify the major elements of what is being said and also to distinguish tone, undertone, implications and other indicators of the speaker's intentions. In discussion, pupils should listen and respond, making contributions which clarify and synthesise others ideas, taking them forward, and building on them to reach a conclusion, as well as modifying ideas in the light of those of others (6). [25]

Assessment criteria for the writing of non-fiction should encourage 'distinctive ways of organising and expressing ideas and information in discursive, argumentative, persuasive and other types of non-fiction writing' (8). There was tension and differences of emphasis between different English criteria. For example, a requirement that the making of inference should be taught was stressed in relation to reading, whereas 'making out one's argument' more broadly was emphasised in the writing criteria. Pupils at the highest levels in reading were expected to:

> Sustain and develop interpretations of texts, supporting their views by references to them ..analyse argument and opinion, identifying implications and recognising inconsistencies. respond cogently to a range of texts, making appropriate connections between them. (33)

Their reading was to be specific and rigorous.

> Pupils sustain their responses to texts, developing their ideas and referring in detail to aspects of language, structure and presentation. They make apt and careful comparison between texts. They identify and analyse argument and opinion, making cross-references where appropriate. (33)

They should be able to follow the thread of an argument, identifying implications and recognising inconsistencies'(15). English criteria also included 'the ability to sustain and develop interpretations of text' and specific discourse markers such as 'well' and 'then'. Students were to 'sustain their response to texts, developing their ideas and referring in detail to aspects of language, structure and presentation', and to demonstrate 'the ability to follow the thread of an argument, identifying implications and recognising inconsistencies'.

Leadership and hegemonic claims by English specialists that their subject is best suited for teaching argument, moral and controversial issues were identified in chapter 3. [26] However, the primacy claim of Kress (1994), that English is 'the only site in the curriculum which can deal with questions of individuality in a moral, ethical, public social sense', was not reflected in the English assessment criteria. The English document rather more conveyed the linguistic claim of ordinary language usage and clarification. It was the development of correct argument and procedural thinking which were emphasised, rather than a 'grand narrative' in subject aims in which major philosophical and human issues were to be addressed. The 'development of thinking' was stressed, however, in requirements for narrative, persuasive, discursive and explanatory writing, suggesting that some theory of progression such as that of Berrill (1990) might be in mind. [27]

While any expectation that English in the National Curriculum would be the lead subject in tackling pre-philosophical education turned out to be unfounded, some other subjects were prepared to take up the task. Science wished to encourage student engagement with speculative metaphysics by raising questions concerning cosmogony. Geography wished to assess the awareness of a major philosophical question; the provisionality of explanation and 'the tentative and incomplete nature of some explanations' (7). [28] Religious education put forward assessment criteria which required teaching some of the major traditional areas of metaphysics. Students were to be encouraged to evince some fundamental categories of philosophical interest, such as 'a desire to search for the meaning of life' (teleology, eschatology); 'developing a personal interest in metaphysical questions'; and interest in 'transcendence' (ontology).

In general the assessment criteria did not reflect the growing public and professional interest of the time in values education conceived as a task of the schools. [29]

Nevertheless, moral philosophy, and ethical dilemmas were to be covered in Science and Religious Education; and both Science and Geography sought evidence, that students had engaged with the 'genuine and substantive' difficulties of balancing environmental policy against scientific and other priorities.

In chapter 4, 'what if?' questions concerning counter-factuals, conditionals and possible worlds theory were argued to be, philosophically and pedagogically, the keystone of any philosophy and pre-philosophical curriculum. In relation to counter-factual thinking, as broadly conceived, a number of subjects did relatively well; Geography, for example, in its desire to emphasis the provisionality of all explanation; English in asking for hypothesis and prediction of outcomes; and Design and Technology, in wanting to look at the implications of decisions and assessments of risk. Some subjects mentioned 'inference' but most did not. Inference was specifically required in Mathematics, Modern Languages, and implicitly in History where 'reasoned conclusions' were expected. Mathematics alone sought assessment criteria for students having engaged specifically in their own forms of *conjecture*. It also sought evidence that assessment criteria were in place showing that 'what if?' questions and 'intuitive probability' had been studied (38, 46). In these respects Mathematics emerged conspicuously and well.

Concerning creative thought and the aesthetic domain, most subjects were muted. However, the Modern Languages document specifically announced that it would seek assessment criteria which would develop students who were 'imaginative and creative'. The Mathematics committee also specified creativity and the aesthetic in their criterion of 'elegant proof' (25). There was a single reference in the English documents to pupils 'writing extensively for aesthetic and imaginative purposes', when autobiography was among the range of types of writing specified. Art and Religious Education emphasised the close relationship between thought and feeling in the growth of argument and thought. [30] It was the RE document, rather than the History one, which specified an approach to the assessment of empathy. The Design and Technology document wished to assess the abilities of students in 'generating ideas'. Religious Education saw creativity as a form of private spirituality, it being one's 'innermost thoughts expressed through a variety of media': and thus at least one subject area addressed the notion of reflexive, personal identity.

12. The need for an explicit canon

On the positive side, a philosopher looking for coverage of *philosophy and the pre-philosophical curriculum* might be somewhat encouraged. Much emphasis in the *Consultative Proposals* was placed on encouraging children to think, and on the procedural dispositions necessary to its good practice. So far as higher order and philosophical thinking were concerned, a number of subjects could be seen as having made a start on such topics as counter-factual thinking, epistemological relativism, ethical theory, and aesthetic aims. The disciplines of Geography, Religious Education and Mathematics were epistemologically and aesthetically courageous by comparison with others.

However, an overall judgement on the *Consultative Proposals* would have to be that there was no consistent or coherent view of what a philosophical or pre-philosophical curriculum should look like. No formal canon, taxonomy or foundational pedagogy, showed how progression in 'the development of thinking' over the whole range of subjects might proceed. The criteria for assessment, designed by a series of subject committees, did not appear co-ordinated. The *Proposals* were not internally consistent or coherent across subject areas; and although there were tentative signs of a theory of progression within some subject areas, theoretical claims and assumptions relating to cognitive or child development theory were never made explicit. Pedagogic under-pinning was not explained even where, for instance, social constructivism in teaching method was strongly implied. The critique made at an earlier time by those drawing up the Science National Curriculum appeared to be endorsed. They had taken a firmly constructivist stance but found that the other core subjects lacked a clear foundational perspective (Watts and Bentley 1991). [31]

The *Consultative Proposals* did not respond to three key questions concerning the philosophy or a pre-philosophical curriculum. These questions, to be addressed in chapter 7, are: i. What is the formal plan of curriculum preparation and pedagogic strategy for the upper school study of philosophy? ii. What is the *pre-philosophical curriculum* in thinking and values education which is to be taught within the National Curriculum, in particular subjects, or across the range of subjects? iii. How is the whole school or college approach to be assessed and evaluated in terms of student achievement and professional performance?

The best that can be claimed is that, embedded within the various *Consultative Proposals*, a pluralistic *inferred canon* could be discerned. Some components of values education subsequently requested in the *National Forum Report* and *Consultation*, for instance in relation to the environment, were already visible. The various subject committees provided some encouragement for both procedural intellectual virtues, and for social practices in thinking such as the notion of community of enquiry and supportive respect for democratic forms of life. However, the lack of coherence and consistency of the *Consultative Proposals* overall suggests that a considerable amount of work would need to be done to achieve an explicit canon and assessment criteria for a pre-philosophical curriculum within the National Curriculum. [32]

13. Identifying sources for an explicit canon

The general approach to the identification of the transcendental curriculum was examined in detail in chapter 3; and this chapter has developed the concept of the *inferred canon*. As O'Loughlin and Campbell (1988) argue, critical pedagogy must begin with the pre-existing beliefs of the prospective teachers and it is the practices of existing teachers which embody many of those beliefs. There are many intellectual resources available which can yield an *inferred canon* while meeting National Curriculum and other requirements.

The Appendices (1-38) to this study offer a range of core ideas and criteria, in the form of resources, by means of which an emerging canon for the *pre-philosophical curriculum* can be identified. Assessment instruments are found in Ennis' (1991) *Ideal Critical Thinker*, Appendix 7); in Facione and Facione's (1992, 1994) characterisation of the *Critical Thinking Skills, Sub-Skills and Dispositions*, Appendices 18 & 19; in Berrill's (1990) modelling of *The Multi-Dimensional Development of Written Argument*, Appendix 8; and in Barrett's (1972) *Taxonomy for the Affective and Cognitive Dimensions of Reading*, Appendix 9. *The Lipman Teaching Approach to Questioning* (1980) is pedagogically helpful.

Epistemological stances and classifications of *Teacher's Ideologies* are represented by Morrison and Ridley (1989), Appendix 2; by Donald's (1992) taxonomy of *How*

Teachers in Higher Education Classify Thinking, Appendix 29; by Pope's (1993) analysis of *Theoretical Concepts on Teacher Thinking*, Appendix 23; and by Goodson's (1992) portrayal of the *Levels of Biography of Teachers*, Appendix 5. Approaches to specific subjects are found in: Driver's (1988) *Characterisation of Constructivist Thinking* (science), Appendix 13; Newmann's (1990) *Indicators of Classroom Thoughtfulness* (social studies), Appendix 10; Shemilt's (1984) *Classification of Forms of Empathy* (history), Appendix 21; and *The Cambridge History Project Assessment Domains* (1992) for A level history, Appendix 14. [33]

Teachers reviewing their practice with a view to formulating policy would find detailed examination and discussion of many of these resources of value in coming to their own view (see chapters 7 and 8). The outline for a master's degree in critical thinking has particular relevance for those planning courses in higher education (Appendix 31). A larger range of documents than the *Consultative Proposals* (which themselves were ephemeral and superseded within the policy process), and the Appendices to this study, would need scrutiny by teachers planning a curriculum in philosophy and pre-philosophy for a particular institution. Many of these will be practical working documents, such as LEA policies, individual school policies, or examination board guidelines. One key exercise, in terms of the argument of chapters 4 and 5, will be to identify the various points in the curriculum at which opportunities for possibilistic thinking are presented; and various instruments provided in the Appendices cater for this need.

This chapter has sought to show that a philosophy and pre-philosophical curriculum, and pedagogy, arising from the philosophical position of transcendental, modal realism, can be formulated in a canonical form. Such a canon may need to be inferred. It will have its foundations in the work of philosophers, teachers and examiners. It will be influenced by mixed societal demands, moving those revising the National Curriculum to respond to agendas identified by the larger society in which quite different conceptions of moral education are sometimes sought (SCAA 1996, QCA abcd 1998). [34] In the case of the National Curriculum for England and Wales, a great deal of clarification and curriculum development would be needed for a coherent canon for the philosophy and pre-philosophical curriculum to be put in place.

The philosophical and pre-philosophical curriculum, in values education and critical thinking, is likely to be given continuing prominence and recognition by public policy makers within the central and local government of education (as identified in chapter 5). However, as Clarke (1993) rightly asks, in discussing the teaching of argument as a contribution to citizenship education within the National Curriculum:

> How is it possible to introduce philosophical thinking into schools given that no mention is made of this subject in the National Curriculum? ...Any adequate notion of education for citizenship must include the explicit teaching of thinking and valuing. (Clarke in Andrews, Costello and Clarke 1993: 23-4)

The preferred approach will put into place a philosophy and pre-philosophical curriculum particular to each school or college, employing a *local, moderate hermeneutic* - in Gallagher's (1992) phrase. An incomplete pluralism is to be preferred to the excesses of centralised systemic curricula, for the philosophical reasons argued in earlier chapters. Chapter 6 will show how this can be done, while Chapters 7 and 8 will argue that the individual school and college staff, and individual teachers or lecturers as public 'transformative' intellectuals, must play a leading role in the formation and implementation of institutional policy for the philosophy and pre-philosophical curriculum.

Notes to chapter 6

1 'The Canon, once we review it as the relation of an individual reading and writer to what has been preserved out of what has been written, and forget the canon as a list of books for required study, will be seen as identical with the literary Art of Memory.'(Bloom 1995: 17). 'Only recently, past the age of sixty, have I come to understand that my literary memory has relied upon the Canon as a memory system' (39).

2 The need to study philosophers and their ideas from the past was the reason that Warnock (in Davies et al 1988) gave for not including the subject in the school curriculum. She took the view that there was not time during schooling to do this (see again chapter 2). See Dougherty (1979) on the uses of philosophy in teaching history.

3 Rorty's first two genres are of considerable interest for this study since they are forms of 'what if?' discussion and therefore relate to the topics of counter-factual conditional theory, modal realism, possible and plausible worlds which were discussed in chapter 4.

4 The selection of Russell's (1912) *Problems of Philosophy* or Sartre's (1948) *Existentialism is a Humanism* as A level texts, both exceedingly well-written in their different ways, would be examples of 'edifying' texts. Further examples might include the work of gifted iconoclasts, like Lakatos or Ayer, who challenge philosophical orthodoxy; or those who, like Plato, Wittgenstein, Kierkegaard, Sartre or Voltaire developed new literary forms - the dialogue, the notebook, the confession, and the philosophical novel, for carrying on philosophy. One could also include philosophers like Averroes or Avicenna, who under the influence of Islamic philosophy facilitated the emergence of scientific thought in the early Renaissance, and who represent a particular minor tradition. See Leff (1958) and Price (1992) for discussion in depth of this question.

5 However, this is an extraordinarily persistent approach. The success of general, introductory works popularising Western philosophy in this way continues, Russell's *History of Western Philosophy* (1922) being probably the best-known. Recent attempts to vary the tradition include such works as: *Driving to California* by Colin Radford (1996), *Looking at Philosophy: The Unbearable Heaviness of Philosophy Made Lighter* by Donald Palmer, *Sophie's World: A Novel About the History of Philosophy* by Jostein Gaarder (1995), also available as a CD Rom; and Benjamin Hoff's (1982) *The Tao of Pooh*, also available on audio tape.

6 Rorty's example of texts which do not advance philosophical theory much, but are well written, meets the 'aesthetic' criterion for a canon put forward by Kress. Lang (1990) follows Spinoza in linking the canonical with the sacred. If a secular reading of a text 'evokes a response of piety' it may then be regarded as 'sacred' or canonical. This is a helpful notion for teachers of religious education in teaching philosophy. An example of an edifying text in practice can be seen in the A level course which uses Russell's (1912) *Problems of Philosophy*, on the grounds of its pellucid style, thus reflecting the notion of 'philosophy as literature' (Lawry 1980, Phillips Griffiths 1984).

7 This problem has been rehearsed in relation to the question of whether one can identify a core canon of great works of English literature.

8 'By the canon I shall mean a list of books held in high, even reverent regard by a stable community of readers; by the Western tradition, a sequence of books beginning with the Homeric epics, that stand to each other in a dialectical tradition of mutual response' (Brann 1993: 193).

9 Examples have appeared in *Teaching Philosophy*, the journal covering high school philosophy in the US, and *Cogito*, a UK journal focusing on A level philosophy topics in the UK.

10 The rehabilitation of Hegel in phenomenology courses at Oxford (Taylor 1989); and the launching of journals reflecting interest in modern European philosophy, such as the *European Journal of Philosophy* and *Philosophy Now*, illustrate such trends (Bowie 1993).

11 Work by linguisticians showing that differing forms of argument and genre have developed for different cultures, is relevant to curriculum issues. See Swales (1990), Mitchell (1992) in *The Teaching and Learning of Argument in Sixth Forms and Higher Education* (18), and Appendix 15.

12 See Lawton (1983, 1989) for successive treatments of this question.

13 See again chapter 2 for a discussion of the IAPC approach.

14 Mitchell (1992: 99) in *The Teaching and Learning of Argument in Sixth Forms and Higher Education* places it in relation to the 'world of the book': 'A literary text can lay claim to the creation of a world, a fullness and wholeness, which, implicitly, to some degree is unchallengeable. It is not a theory about the world; it *is* the

world...Literary does in many ways refer to the 'real world' but it also constitutes a real world in itself.' Ryan (1991) develops this idea more fully.

15 The first school course in A level philosophy was offered to older students in sixth forms or colleges of further education in 1985. The subject was first offered, as a separate examinable subject at A level, simultaneously by two English examination boards. See Ward (1983), Ross (1988) and Guardian (1985) for contemporary discussions. See again chapter 2 for arguments put forward by Scruton, Warnock and others.

16 The first part comprised four historical periods: Greek Philosophy, 17th and 18th century Philosophy, 19th century Philosophy and 20th century Philosophy. Each period involved studying two, and in the case of the 20th century, three prescribed texts; 1. Plato - *The Republic*, Aristotle - *Nicomachean Ethics*; 2. Descartes - *Meditations*, Hume - *An Enquiry Concerning Human Understanding*; 3. Mill - On Liberty; Marx and Engels - *German Ideology*; 4. Russell - *Problems of Philosophy*, Sartre - *Existentialism and Humanism*, Ayer - *Language, Truth and Logic*. For their philosophical themes students could choose from six possible areas; Our Perception of the External World; Faith and the Existence of God; Mind and Body; Scientific Method; Value Judgements; Freedom, Law and Authority. In the examination two essay questions on each of the two chosen themes were required to be answered. An alternative syllabus offered by the Joint Matriculation Board attempted a broader approach, including a course work special study; and some coverage of issues such as animal rights. Here one could detect signs of a claim for teaching philosophy based on relevance. The prescribed texts and philosophers included those who had made edifying contributions and those who were historically important in the development of the subject.

17 See contemporary critiques such as those of Butler (1985), or Eaton (1984, 1987) who wished to offer a joint English and Philosophy A level.

18 'The Board's proposal counts as philosophy,' Ward concluded (1983: 254).

19 This last requirement links with benefits claims for philosophy teaching which relate to conflict studies and argumentation theory, critical and 'transferable' thinking (chapter 2). The connection argued by Berrill, Dixon, Fox and others between narrative, exposition and argument in the development of children's thought is also relevant here (chapter 3).

20 See Haydon (1990: 2).

21 See again chapter 2, where claims concerning transfer and generalisability were appraised. These arguments are of especial interest in relation to teaching philosophy, the subject which deals epistemologically with the analysis of meta-thinking and its practice. A systematic rationale for the place of metaphysics and aesthetics within the curriculum of schools and colleges would also be needed.

22 However the curriculum receives little in attention in works on rights in primary schools; see Wringe (1981) or Chamberlin (1989: 87-8 & 98-100).

23 It is McPeck who is generally acknowledged to have raised to the status of a central issue, the question of general as opposed to domain specific critical thinking skills, the issue that became 'the Great Debate'. See Weinstein (1993a: 100).

24 See an earlier document of interest, the *National Curriculum Task Group on Assessment and Testing: A Report* (DES 1989). The general UK context for a National Curriculum was set out in the *Education Reform Act* (HMSO 1989).

25 *Consultative Proposals of the School Curriculum and Assessment Authority on the National Curriculum for England.* (1994).

26 See also Andrews, Costello and Clarke (1993), Clarke and Sinker (1992) and McCulloch and Mathieson (1995).

[23] It is McPeck who is generally acknowledged to have raised to the status of a central issue, the question of general as opposed to domain specific critical thinking skills, the issue that became 'the Great Debate'. See Weinstein (1993a: 100).

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[25] *Consultative Proposals of the School Curriculum and Assessment Authority on the National Curriculum for England.* (1994).

[26] See also Andrews, Costello and Clarke (1993), Clarke and Sinker (1992) and McCulloch and Mathieson (1995).

[27] Berrill's (1990) thesis is that argument emerges via exposition and narrative. For an account of 'persuading as storying' see Hesse (1989).

[28] This is not surprising. Geographers operate within a phenomenological stance of the theory of knowledge in relation to their subject. See again chapter 3 which examines the extent of ideological assumptions as part of the 'transcendental claim'.

[29] The growing interest in the training of dispositions within the US critical thinking movement and within UK vocational education, for example, was traced in chapter 5.

[30] See again chapters 4 and 5 for a discussion of 'empathy' in relation to intellectual and affective dispositions.

[31] Watts and Bentley (1991: 171-9) found that while most schools showed evidence of a minimum, 'convenience' or 'weak' form of constructivist practice, only science was committed to such an approach in the formal National Curriculum. 'Thus, a curriculum built upon the criteria for strong constructivism would be very different from the National Curriculum as it is organised and, indeed, would have far-reaching implications for the structural and organisational features of schools as they are now.' However, Matthews (1994) demonstrates that constructivism is a contested, plural concept in the minds of educationists; and that there is a job of philosophical clarification to be done.

[32] For instance, inspection procedures could be adapted to look at the quality of thinking in classrooms as part of lesson assessment. That such an approach has been lacking in current practice is clear in OFSTED's (1994) *Framework for the Inspection of Schools in the UK.*

[33] These taxonomic instruments are provided as Appendices. There appears to be no literature of this type in relation to philosophy teaching in schools and colleges. An *inferred canon* for pedagogy in the UK, can be gleaned from articles in the journals for students, for example *Cogito, Philosophy Now* and *Dialogue,* from conference contributions, and from the reports of A level examiners.

[34] A new dimension to the debate arose in OFSTED's (1996) *Report of the National Forum for Values in Education and Community.* It proposed that a consensual canon for values education should be arrived at for use by teachers in schools. However, QCA research and consultation in 1998 revealed the further fact that parents have some reservations about full-blown programmes of moral education, while for instance being strongly in favour of specific teaching on health education. A proposal for an AS level syllabus in critical thinking and moral education within post-16 general studies was also put forward by the Schools Curriculum and Assessment Authority, and is in process of development; for a specimen proposed syllabus see Fisher (1996).

CHAPTER 7

Organising a whole school or college curriculum in philosophy and pre-philosophy.

1. The need for a whole school or college policy

The most important questions with which chapter 1 concluded have now been addressed. Chapter 7 will explain, using the argument of chapters 1-6 as a foundation, how a 'strong version' of the philosophy and pre-philosophical curriculum as a whole school or college policy can be put in place.

A 'strong', whole school or college policy will set out a strategy for philosophy and pre-philosophy teaching which covers curricular, pedagogic and management approaches. This can be done by devising and implementing what Craft (1991) calls 'an entitlement curriculum'. Such an 'entitlement curriculum' will need to be characterised by a pedagogy based on the principles of transcendental realism and possibilist thinking, as put forward in chapters 3 and 4. It will give emphasis to each of the traditional areas of philosophy; aesthetics, epistemology, ethics and metaphysics.

Putting a policy into place will involve a major programme of staff, curriculum and pedagogic development within the institution (Thornbury 1994). [1] That process, which sees teachers as collectively concerned with the 'development of liberal learning' (Pring 1995: 179), is characterised in this chapter, for the sake of simplicity, as a series of steps. However, the sequence in which these steps are actually pursued will vary according to local circumstances; and drawing on the lessons of school improvement research, it will be found possible to enter the cycle of innovation and development at various points (Fullan 1992). [2]

2. Making an action plan for putting a curriculum policy into place *(STEP 1)*

There will need to be a very clear action plan and responsibility structure for the policy of putting *the philosophy and pre-philosophical curriculum* into place. In a secondary school, one deputy head or senior curriculum manager, supported by a working group of staff, might co-ordinate implementation of a whole school policy. In a college, the arrangements may be faculty-led, or focused on a department or unit specialising in transferable learning in vocational education, or learning support. The education of the dispositions and virtues, through some form of citizenship or 'values education' is likely to be a prominent concern, as argued in chapter 5. The whole institutional plan will be the subject of consultation and planning with the governing body of the school or college. The roles of the leaders of subject departments, and the tasks they are to undertake in curriculum mapping and subject leadership, will require clear guidelines.

The staff may also wish to seek training or advice from in-service advisers, or inspectors, and the resident philosopher, if there is a philosophically trained teacher on the staff, in the working-out of the whole school or college philosophy. Consultancy and course provision from philosophers of education working within higher education, especially the teacher education setting may be helpful. [3]

The approach which sees the whole school or college as a democratic community of enquiry should be adopted. [4] This will involve asking teachers, first individually, then working in larger groups, and finally as a whole staff, to look together at key questions which arise during the adoption of a whole school or college curriculum

strategy for teaching philosophy and the pre-philosophical curriculum. Some consultation should occur at each stage with other interested parties, including students, their parents, local education authority staff, and the governing body.

That it is necessary to stress the role of the individual professional conceived as a responsible *public intellectual* will be argued more fully in chapter 8. Each teacher should first appraise the central arguments concerning a pre-philosophical curriculum and decide on his or her own position. [5] After that reflective stage, a debate followed by consensual negotiation should take place among the departmental teams. Only then should the third stage commence of whole staff discussion, in which an institutional policy is decided upon. Account will need to be taken throughout of national, local authority, professional or subject association, or diocesan viewpoints, and regional or local policy structures beyond the individual school or college. In England and Wales, developments in critical thinking, values and moral education are likely to have a high profile and will require cautious assessment in relation to how individual schools or colleges decide to respond. [6]

3. Identifying philosophical leadership *(STEP 2)*

The provision of adequate philosophical leadership in developing a whole school policy for the philosophy and pre-philosophical curriculum will be of great importance (McArtney and Schrag 1990, Ryan 1992, Schrag 1987, 1988). The significance that should be attached to philosophical leadership is argued philosophically by Hodgkinson (1983, 1991). Hodgkinson asserts that there is a hierarchy of values operating in a school which ranges from the good to the right, which he calls 'the 'value paradigm'. The highest order of these values is trans-rational, essentially metaphysical, and based on the acceptance of a principle. At the opposite end of the scale lie other values which, based on personal preference, are influenced by emotion and feeling. [7] Leadership will therefore involve the addressing of philosophical assumptions, involving values, ideology, and the school's philosophy and ethos, which are held by staff. Both Hodgkinson and Greenfield (1989), whose phenomenological management perspective was discussed in chapter 3, envisage that a pluralism of subjective views will be present. [8]

Members of staff who teach philosophy, or who are philosophically trained, will have a particular role to play in providing philosophical leadership. The availability of such a person on the staff will vary. A large college or a secondary school is likely to have, if not a specialist teacher of philosophy, a member of staff specialising in cognate areas such as thinking skills, higher order thinking, transferable thinking or study skills. Staff working in Special Needs, or Pastoral, Social and Health Education curriculum might have such an interest. There is also the possibility that a curriculum specialist, such as a member of the English or Science departments, would be active in the areas of problem-solving or argument.

It will be relatively unusual to find a specialist philosopher on the staff of a primary school, although it is not unknown. There will certainly be one or more members of staff who have a conceptually sophisticated understanding of child development, together with issues in teaching, learning and thinking which arise in the early childhood and primary classroom. [9] If the argument of chapters 4 and 5 has been accepted, the vision of philosophical leadership for the curriculum and pedagogic programme can be expected to place emphasis on the need for counter-factual and possibilistic thinking.

4. Establishing a shared notion of rationality *(STEP 3)*

A key problem for staff to face in philosophical terms will be the range of differing view-points among staff, on a broad spectrum of questions relating to the curriculum, pedagogic and organisational ideology within a pluralist, multi-faith society (Haydon 1987). What was characterised in chapter 1 as social movement 'contestedness', and what Hoyle (in Bush 1989: 134) describes as 'conceptual pluralism', are likely to be found in most schools and colleges.

It may not be possible therefore to make an assumption that the school or college functions on a philosophy of shared rationality, along the lines argued by Siegel (1988, 1993) or MacIntyre (1988). [10] Chapter 6 showed how finding a canon of rationality may be less straightforward than at first envisaged. MacIntyre's traditionalist hermeneuticism, or Siegel's Enlightenment view of rationality, for instance, may have to be reconciled with the post-modern critiques first described in

chapter 1. As Weinstein (1993ab) points out, the debate concerning the claims and assumptions of traditional critical thinking and philosophy teaching has been 'reconfigured', in relation to issues of gender, literacy, and the under-class in urban schools. Weinstein when reviewing the critiques of Bailin (1995), Kincheloe and Stemberg (1993), Haynes (1991), Assiter (1994), and Thayer-Bacon (1993), calls for *inclusion* to be a major objective of the critical thinking movement, and of US national educational policy.

It could be asked: If there is no agreement on the philosophical canon, how can a common school policy be reached? How can agreement be reached in implementing a whole school approach to claims concerning the dispositions and virtues, for example, if there is no agreement on what the aims and purposes of the school are? The view of MacIntyre that one should look for a canonical, shared rationality, or Siegel's unapologetic demand for *ideological rationality*, are relevant here (see chapters 3 and 6). Such an approach can also be formulated in terms of the *ideal speech situation* of Habermas (1970, 1981), or dialogic rationality and *double arguability* about content and the method of discussing it (Myerson 1994). *Authenticity* will also need to be sought in the thinking of both staff and students, in the sense discussed in chapter 5. This will raise questions concerning whether the world is perceived in the Bhaskarian mode (as discussed in chapter 3), the applications of counter-factual thinking (chapter 4), or the pedagogic and ethical issues faced by the individual teacher (chapter 8).

A considerable degree of pluralism will be inevitable in the range of responses which staff will make. More than curricular and pedagogic approaches will be affected. Managerial assumptions and practice will partly set the tone and context for discussion concerning the philosophical and ideological purposes of both pedagogy and curriculum. [11] Conceptual pluralism in the staffroom, and a range of contested or competing rationalities among teachers or lecturers concerning aims, purposes and content will arise from the variety of response to the claims advanced in chapter 2. Consequently, there may not be agreement over how to implement claims within an individual institution (Goldman 1975). Wright (1992), for example, shows how there are different implications for curriculum policy in each of the four, dominant conceptions of critical thinking, namely those of Ennis, McPeck, Paul and the Philosophy for Children Programme.

What might be hoped for is some commonly accepted framework for going forward with the possibilistic claim, both as presented in chapters 4 and 5 and in Keke's (1993) characterisation of pluralism in the good life:

> The plurality of possibilities is important for good lives...not merely because the possibilities are means to good lives but also because they are constituents of them. (29)

It is for these reasons that the present study is prescriptive about the need and the broad framework for an individual institutional policy. The canon itself, as argued in chapter 6, must be accepted as pluralistic on philosophical and empirical grounds.

5. Forming a community of enquiry *(STEP 4)*

The strong version of the claim for a pre-philosophical curriculum favours the need for school or college life Gutman (1987), Kelly (1995), or White (1996) to be envisaged as social democratic. [12] Where this is the case, there may be a shared, communitarian view of rationality that extends across the institution. However, an elitist approach with its own curricular and pedagogic arrangements will sometimes arise (see chapter 2). Lipman's democratic argument for a community of enquiry approach to philosophy teaching is not compatible, for instance, with the non-egalitarian claims of those who see philosophy as an elitist form of study which only the few are capable of undertaking.

For example a school staff may wish to insist that A level philosophy is only to be taught within the rubric of Religious Education. One may disagree with that position, but it has a respectable philosophical provenance, philosophy having historically emerged from theology, as chapter 1 demonstrated. Tensions will also arise in a school or college where the pluralistic questioning of values is not acceptable, since particular truth claims are espoused in relation to religious belief. The individual teacher in an unsympathetic setting may find it necessary to take a personal, hermeneutic position which is at philosophical variance with, while not breaching the practical consensus reached with colleagues.

This study has broadly supported the constructive notion of the classroom as a Habermassian community of enquiry where there is commitment to openness to evidence and to reason, to dissent as a right, and to procedures of democratic citizenship which are internalised and 'become the reflective habits' and dispositions of the individual (Lipman and Sharp 1978a: 88). This does not, however, mean an abdication from authoritativeness by the teacher.

> It is the teacher's responsibility to ensure that proper procedures are being followed...although manipulation of the discussion so as to bring the children to adopt the teacher's personal convictions is 'reprehensible'. (88)

Such authoritativeness will require practical pedagogic strategies, such as question-asking (Appendix 12), the ensuring of 'turn-taking' in conversation (Sacks et al 1974), and techniques for dealing with the demagogic, inauthentic or sophistical student (Stenhouse 1973, Bonnett 1994).

6. Reconciling ideological claims *(STEP 5)*

A question which members of staff will want to discuss with great care concerns how far an ideological or a value-free position is to be reflected in the practice of the *philosophy and pre-philosophical curriculum.* This will be especially true where programmes of values education, or in the virtues and dispositions, are to be embarked upon. [13] Humean 'journeyman' claims for the teaching of philosophy or the improvement of thinking in a school as linguistic clarification may not arouse controversy. They do not involve ideological questioning of the social foundations of knowledge, of the nature of society, of authority and democracy in school life and so forth. But the *strong version* of claims for a pre-philosophical curriculum will unquestionably extend to fundamental questioning of assumptions about school organisation, pedagogy and even aspects of the teaching of individual subjects, such as religious education. The teaching of students to question authority, or be iconoclastic, could then be regarded as controversial.

The 'ideological' nature of the vocational claim concerning transferable thinking may, for instance, arouse staffroom controversy (Wiener 1985, Bridges 1996). One may

broadly agree with Siegel's claim in chapter 2, that thinking that is driven by rationality cannot be said to be ideological in any pejorative sense. But thinkers like Assiter (1994: 23), it will be recalled, argue for a radically different model of the vocational dispositions, competency and embodiment in thinking. Unlike the traditional approach, their model values the bodily domain; and its intellectual origins employ a theory of knowledge which sees knowing subjects as historically and contextually situated.

There are different consequences here for the teacher or lecturer. Education for the dispositions within the 'new vocationalism' goes some way beyond a commitment to rational ideology - towards the embodied, flexible ready-wittedness described in chapters 4 and 5. Moreover, for some lecturers or teachers there would be a tension between making potential workers more critical, and improving their acceptability as compliant workers through training in transferable thinking. Many 'academic' staffrooms would resist a further implication of the model, that greater importance on the timetable should be given to physical education, the plastic arts, drama or craft technology.

Equity issues will also need to be addressed in planning both curriculum content and coverage, and pedagogic strategies. Some will argue the need for balance in the schemes of work to be adopted, in relation to equal opportunities policy. For instance, the representation of black or women thinkers or multi-faith perspectives, may be urged, in the context of a hermeneutic claim set in the ethnic, cultural and religious context and affiliations of the school or college. New and additional curriculum resources will need to be identified and tried out (see below). There will be continuing discussion and revision of the *canon*, as depicted in chapter 6.

7. Deciding on the approach to values education *(STEP 6)*

Pressures for values education within the *pre-philosophical curriculum* will reflect staff pluralism and arise from other diverse sources, including curriculum bodies, examination boards, governor, parent and student bodies, and funding agencies. Issues of accountability which are partly cultural, philosophical, professional, political will arise (Bottery 1990, Starratt 1994, Scott 1989). [14] The staff will have to

consider their response to the claims for the training of the dispositions and moral education, education for democracy and citizenship (Arnstine 1995, Schrag 1987), economic life, or even the selection and training of a leadership elite within the society. The case made by the Schools Curriculum and Assessment Authority (1996) in *Report of the National Forum for Values in Education and Community* in England and Wales for values education, including at A level, will need to be examined in the context of the arguments of philosophers such as Haydon (1997).

Some teachers and lecturers will have strong professional as well as philosophical views on the extent to which teaching values or 'transferable' thinking should aim to develop dispositions, or traits of character (Bridges 1996). Katz (1993) wishes to begin on dispositional training in early childhood. Winter (1994) wishes to see in the older student vocational 'virtues' such as cheerfulness, compassion, empathy, resourcefulness and 'awareness of the need to counteract one's own tendency (both as a person and as a professional worker endowed with specific powers) to behave oppressively' (Appendix 25). [15]

There should therefore be a statement of *professional ethics* within the institutional policy. Such statements are increasingly found in cognate professions, such as nursing and social work, or business. [16] This should apply not only to the curricular and pedagogic practice, but also to collective staffroom life where issues in professional ethics such as 'what is 'authentic' collegiality?' increasingly come to the fore (Ihara 1988, Little 1985, 1990, Wallace 1989). White (1996: 89-96) argues that consensus over such matters will require time. Teachers need opportunities to discuss with colleagues how a school or college community can be modelled; 'in which students can become hopeful, confident, courageous, honest, self-respecting citizens with appropriate self-esteem, knowing how, when and whom to trust and distrust and able to experience the rich pleasures of friendship.'

8. Clarifying philosophical issues in pedagogy *(STEP 7)*

It will be necessary for a whole school or college staff to take up a philosophical position on a range of *pedagogic issues* in relation to the particular curriculum that is proposed. There will be a need to decide what contribution particular theoretical

accounts of child or human development are considered to make to learning and the curriculum (see chapter 5). [17] Teachers will re-visit some critical questions about how students learn, such as how domain-general and domain-specific knowledge interact within 'alternative' conceptual frameworks, the theory of teaching as 'assisted performance', and relevant work done on adult learning (Donald 1985, 1992) or academic literacy (Entwistle 1987, Entwistle and Entwistle 1991).

They should consider the claims of social constructivism, and its variants such as the phenomenographic account of learning, which have major implications for the approach to possibilist and creative thinking - and preparation for teaching it. The Vygotskian claim that thinking is socially constructed through language during a long apprenticeship in the pre-philosophical curriculum will have direct implications for the curriculum to be adopted, since it is supportive of teaching within a community of enquiry.

A view will need to be taken on the genetic epistemological claim in relation to how children's emotional and intellectual development and learning occurs (Adey and Fairbrother 1995). Those agreeing with Kitchener's (1990) case that young children are inherently, and developmentally incapable of undertaking philosophising in any serious sense (see chapter 2) could rule out use of IAPC Philosophy with Children as an intervention programme. [18] Others will find the approach valuable (Nicol 1990).

Differences of perspective over child development will be less relevant in the secondary school or college but will be replaced by other concerns. Pedagogic debate is more likely to centre on whether generalisable higher-order thinking, critical and creative skills exist; about whether they can be taught; about the extent to which each subject or discourse has its own enclosed system of thought and feeling; and whether specialist philosophy should be taught separately, or within the religious education offer at A level. [19]

Chapters 2 and 4 sought to demonstrate that claims concerning different types of intelligence, transfer, or teaching and learning styles, will shape one's approach to the 'thinking curriculum'. In this field, and that of the *transfer* of learning and cross-domain thinking, while there is some empirical research evidence, mature research conclusions are yet to be established. Those preparing a *pre-philosophical curriculum* can act only on a provisional assumption that conclusive evidence of transfer will be

eventually forthcoming. But that is the stance which, in my view, should be taken up. Armstrong (1994), for example, argues that the concept of multiple intelligence has a special place in provision for those with learning difficulties.

The 'strong version' of the proposed curriculum also involves a particular view of *progression* between early childhood and sixth form or further education. [20] A school or college staff may already have a whole school policy on progression, in relation to various aspects of the National Curriculum or General National and Vocational Qualifications (GNVQ's). However, this study raises the questions: 'How can progression be integrated within the teaching of thinking and philosophy as a cross-curricular theme?'; 'How does progression link with notions of school democracy and the community of enquiry?'; and 'How does it relate to notions of vocational and life-long education?' It will be appropriate to attempt certain kinds of philosophical work or discussion at particular ages or stages of intellectual and affective development.

The Appendices, the Bibliography and many authors cited in this study can be usefully drawn upon in relation to progression. Berrill's (1990) helpful account of narrative as the bridge between exposition and argument was identified in chapter 3 (Appendix 8). Her taxonomy links in turn with a theory of narrative development of young children's thinking by Fox (1989a, 1989b, 1990; Appendix 16). Computing has a major contribution to make in the overall curriculum; and a particular contribution to make to the development of skills in written argument (Snyder 1992).

The approach to progression should emphasise the multi-sensory nature of philosophical apprehension and learning. This suggests the extended use of children's literary and illustrated stories in pursuit of progression in children's philosophical ideas, along the lines suggested by practitioners such as Cam (1994a, 1994b), Guttmansdottir (1991), Matthews (1976), Kruise (1987), Markle (1987) and Murris (1992).

The position taken up on curricular and pedagogic progression in relation to students also applies to staff development. The 'strong version' of claims for a philosophy and pre-philosophical curriculum entails the need for life-long *education permanente* in philosophical thinking for both children and their teachers, for instance in re-shaping the notion of thinking as work (White 1997). Concepts of teacher's lives, personal

and philosophical progression, stages of biographical transformation, and professional reflection, then take on importance (as discussed in chapter 8).

9. Identifying the general curriculum contribution *(STEP 8)*

It will be important in secondary schools and colleges to assess how far colleagues or departments specialising in transferable learning can contribute special expertise and leadership to the institutional strategy. [21] This may be a political question in that competing claims for 'ownership' or leadership of the development of the whole school policy or canon have to be resolved (Appendix 22). One or more departments may, for instance, bid for hegemony, arguing that they should be responsible for the strategic, curricular approach to pre-philosophy, transferable or higher order thinking.

Special needs teachers of language may claim that their work on argument and thinking justifies their department having the principal responsibility for school policy in the pre-philosophical curriculum and higher order thinking skills. [22] Science teachers who have been teaching programmes of problem solving and 'cognitive acceleration' could claim a leading role in secondary school policy. Historians might want to claim a special place for the teaching of empathy. The specialist philosopher on the staff might want to have a 'voice' in monitoring the progress of the policy, and such matters as the quality of the final documentation. Overlap between philosophical content in A level Religious Education and the A level Philosophy, may need to be adjudicated upon, thus affecting the academic counselling and advice given to students.

The approach to what Newmann (1990) calls 'classroom thoughtfulness' in their own subject will, however, be uppermost in the minds of most teachers. A preoccupation with the subject as the originating base for transferable thinking has been shown to be persuasive (chapter 3). Thinking is always about something; and it is always about a subject, even if that subject turns out to be meta-cognitive in its own right as in the case of philosophy. [23] It will be important to ensure, therefore, that a staff engage together in a *curriculum mapping* exercise of what, and where philosophical questions are presently covered in the various subject areas.

Newmann's (1990) subject instrument could be profitably used by most heads of subject departments concerned with curriculum development in the teaching of thinking (Appendix 11). The need for adjudication between the claims of different subject teachers, departments and approaches, to teach specific or the same philosophical topics, can then be sensibly addressed in a way which pre-empts staffroom conflict. [24] Where access to certain philosophical concepts and understanding can best be obtained through the teaching context of a particular specialist subject, especially precise negotiation will be necessary. [25]

Curriculum mapping, sharing of information, negotiation and adjudication will therefore be an extremely important aspect of policy implementation. It is also likely to generate development and collaboration among teachers in further framing the pre-philosophical curriculum. [26] For instance, as chapter 4 showed, the position on 'empathy' taken by history teachers requires to be more fully explored by other subjects. [27] A cross-curricular approach, will therefore be essential (Appendix 6).

It is particularly important that primary teachers take both a general, and an individual subject view on the approach to whole school policy. Primary teachers co-ordinating or leading a particular curriculum area, and in their class-teaching role, will have to work out the approach both to their own specialist subject, and a larger group of subjects. As far as possible, a *philosophy and pre-philosophical curriculum* should be worked on by the whole group of staff, although aspects of the task may need be delegated to an interested sub-group of staff convened for the purpose, or even individuals.

10. Agreement on the distinctive contributions of individual subjects *(STEP 9)*

Considerable emphasis has been placed in this study on 'thinking in the content areas', on the ground that most, although not all philosophical content originates in subject thinking and that thinking is 'parasitic upon the disciplines' (McPeck (1990: 43). Chapter 3 showed how Nussbaum and others have identified the embedded nature of the philosophical curriculum in each subject context. A key task for subject teachers will be to decide which ideas cannot at all be meaningfully separated from the

experience of the specialist subject, its content and processes; and which ideas and content can be thus separated (Burden and Williams 1998: 19). They should also form a view about which specialism should teach those ideas which, although generalisable, should be first taught in a subject context.

The varying claims of the subject specialists have to be examined by those responsible for curriculum co-ordination and a whole institutional strategy decided upon. For example, with respect to history teaching through empathy, Portal (1990: 37) argues that 'the place for greater complexity, more background knowledge is after some level of active thought has been established.' Adey et al (1994) claim that inductive thinking should be taught first in the context specific setting of science, in order to achieve maximum transferable benefits to other subjects.

How a philosophically- based pedagogy could underpin a strong version of the teaching of philosophy and a pre-philosophical curriculum, in its impact on quantitative and qualitative *stochastic*, and conjectural thinking, was demonstrated in chapters 4 and 5. There it was suggested that such thinking will extend across domains, and involve different intelligences or cross-sensory modalities. Assiter (1994), for example, argues that thinking is a form of craft work involving the senses. In a whole school policy, such considerations would have a particular impact on the curriculum in the expressive arts and physical education, especially in reflecting cultural notions of the 'body-self' (McLaren 1996). [28]

That there is a growing need for subject teachers to review their approach to both the content and methods of thinking, and especially the mind's relationship to the material world, was argued in chapter 5. This issue, as well as being to do with the body-self duality, is a pedogogic and curricular priority. Many science educators, for example, wish to up-date the conceptual world of the science curriculum, replacing it with one which is post-Newtonian, which recognises quantum theory, and which moves away from the 'metaphysical presupposition of duality' underlying a Western scientific world-view (Mashhadi 1997a). [29]

11. Deciding on a cross-curricular approach *(STEP 10)*

The need for a cross-curricular approach, accommodating the pervasive presence of philosophical content in the different subject areas, means that specialist subject perspectives will dominate discussion of a policy for the secondary school or college. Theories of child development and learning will generally play a more important role in informing the approach taken in the primary school, since they are more explicitly held and talked about there than in the secondary school or college. In either setting, as Watts and Bentley (1991) claim, some variant of the constructivist approach is likely be found, even if this will not always be explicitly formulated except in science (see again chapter 6). [30]

The cross-curricular offer should involve, wherever possible, some formal philosophy teaching for those student interested in having a taste of the subject. This could even be organised as an elective option, or even extra-murally. Some students would like to learn about philosophers in history, to be introduced to some appropriate technical distinctions in philosophy, or to learn more about critical thinking, problem-solving or philosophy for children. The cross-curricular programme should allow for the use of some separately-taught 'intervention' programmes, developing generalisable thinking or 'transferring' meta-competences. Teachers will need to consider whether or not they agree with Quinn (1991, 1994) and those who argue that both critical thinking and philosophy should be taught as separate subjects. As Nisbet (1991: 181) points out, this involves an important epistemological judgement concerning which aspects of a subject are 'content free' (see again chapter 2). [31]

In thinking about which cross-curricular approach is needed, in forming one's own *canon*, an analysis of the various kinds of thinking which are asked for in the National Curriculum for England and Wales will be helpful (see again chapter 6). This will include the examining of assessment criteria found in the documentation of external bodies, both local and national, for instance with examination syllabuses, inspection schedules, or vocational education criteria (Soden 1993). [32]

Teachers who have accepted Craft's (1991) case for a cross-curricular approach to the pre-philosophical 'thinking' curriculum will find that there are sometimes severe time tabling constraints (see chapter 6). [33] Cross-curricular time tabling is already well-

established in many further education colleges or secondary schools which are actively engaged with transferable thinking and study skills in vocational education; or which have flexible learning policies, departments or units. The picture in primary schools is more fragmented, although often exhibiting features of good practice. Those who offer a general rationale for 'teaching thinking', philosophy for children, or problem-solving in primary education are not always helpful concerning cross-curricular approaches. They tend to concentrate on narrow aspects of primary school pedagogy, and the promotion of various forms of intervention programme (Dowson 1987, Fields 1995b, Fisher 1987, 1990, 1995). [34]

Overall guidance in the National Curriculum literature for a whole school approach to a canonical curriculum and assessment criteria has been distinctly lacking, as was demonstrated in chapter 6. In general, therefore, in addressing cross-curricular policy the adoption of a combination of five practical strategies - and especially the first - as set out in the National Curriculum Council document, *Curriculum Guidance No. 6: Economic Awareness* (1989), is recommended (Appendix 6). Seen in this way, everything from A level philosophy to study skills can be integrated within the curriculum and pedagogic policy. Institutional preparedness for accountability through OFSTED inspections and achievement surveys should be thereby improved.

12. Selecting intervention programmes *(STEP 11)*

In arguing for a curriculum entitlement in relation to the National Curriculum, Craft (1991) wishes to identify 'named thinking skills' in the core and foundation subjects and address them partly through intervention programmes within an agreed whole-school policy. Teachers should consider the claims and counter-claims made on behalf of intervention programmes most carefully before deciding on their approach. Different emphases will inevitably emerge among colleagues. Some staff will see the teaching of thinking as strategic in tackling the under-achievement of less intellectually able students, as in the approach of Feuerstein. Others may wish to use the Philosophy for Children programmes for 'enrichment' activity for a minority of intellectually able or gifted children, rather than for engendering a whole school, democratic community of enquiry. Yet others will argue for courses of an unusual or specialised nature, such as a logic course at GCSE 'O' level. [35]

Within the cross-curricular strategy there should be judicious use of intervention programmes. Craft (1991) argues for a contribution from each of three thinking skills schemes, or intervention programmes: the Lipman philosophy, the de Bono CoRT (Cognitive Research Trust Method) and the Feuerstein Instrumental Enrichment scheme as taught in the Oxfordshire Skills Project. [36] The Lipman *Philosophy for Children* programmes have been further extended across the age ranges, and can be taught in primary and secondary school versions modified for U.K. and Australasian use (Nicol 1990, Cam 1994).

To these can be added the 'cognitive acceleration' (CASE) programmes, now available in both science and mathematics, which Shayer (1991) and Adey et al (1994) claim should generally be used for children aged 11 to 13 years. The Feuerstein approach can be used with the lower ranges of age and ability up until 11 years of age. Given its disappointing outcomes with the less able children but demonstrated success with clever and gifted children, the De Bono approach and materials should be only be used at the upper end of the secondary school with 14-16 year old pupils. [37] Intervention programmes in problem-solving, sensibly approached, have much to offer teachers (Heaney and Watts 1988, Adey and Fairbrother 1995). However, it should be recognised they are often afflicted with the limitation identified by Watts and Bentley (1990), of a 'weak' constructivism concerned with limited short-term effects. They should be seen as only a minor component of an institution-wide *philosophy and pre-philosophical curriculum* in which subject teaching is accorded most prominence.

13. Formulating the approach to transferable thinking *(STEP 12)*

The case made by Bridges, Winter, Assiter and others working in the further education sector for *transferring skills* was broadly accepted in chapter 2. The further education sector has led in such approaches, a wide range of materials being available. [38] But how a school or college is to 'deliver' *study skills* as part of a pre-philosophical curriculum is a major issue in institutional policy.

The absence of a critical thinking or pre-philosophical curriculum in the UK setting could be argued to have left study skills as an area of practice looking for a theoretical foundation. The purview of study skills has been expanding, taking in the new influences of 'academic literacy', rhetoric and argument, flexible and transferable learning. Not just revision, library, reading, and homework time, but even the whole of the approach to the reading curriculum may occasionally be included in a whole school strategy (Waterhouse 1990). [39] However, as Adey and Fairbrother (1995) point out, while many schools help students with study skills as examinations approach few schools have programmes for teaching learning skills or strategies. [40]

The challenge of teaching 'thinking skills' has been most often taken up by special needs staff or departments who have been given a cross-school role. However, they often work at a disadvantage in not having been trained in the areas of philosophical pedagogy, psychology, critical thinking or curriculum studies covered in masters programmes (see Appendix 31). For example, a clear concept of various levels of reading and writing comprehension is essential in knowing how to approach inference in thinking and reading development (Barrett 1972, Berrill 1990). The 'whole curriculum' approach to meta-cognitive thinking can underpin and act as a foundation for study skills. The case can be made for secondary schools using study skills as their starting-point for critical thinking, and gradually extending its definition and scope. Staff development and inservice education and training will help here.

In relation to the whole curriculum, the provision of a *specialist philosophy* course will round off and consolidate the work on a pre-philosophical curriculum which has been undertaken during school or college life. It may be begun before the sixth form with those students or those teachers who evince an interest. Clarke (1992), it will be recalled, argues for philosophy teaching in elaborating a claim that argument is the 'natural property of English teaching'.

> There is still work to be done, I think, on a systematic experimentation of largely unexplored possibilities to do with relationships between reading argument and writing, and with seeing how speech can be drawn upon and extended. Let's try some philosophy in the secondary school. (Clarke in Andrews, Costello and Clarke: 233-4)

For those students not studying philosophy as a specialist subject in the sixth form or college, the short course in Critical Thinking at Advanced Level as proposed by Fisher

(1996) will extended the range of school or college provision on offer. Finally, teachers will wish to look closely at the question of how the specialist A level course in *philosophy* relates to the *pre-philosophical curriculum* which has now been put in place to precede it.

14. Codifying principles of entitlement and access *(STEP 13)*

Having inspected the claims and decided upon their institutional policy, the staff will be ready to confirm exactly what the curriculum entitlement is to be for all the students, and for particular children.

Where a 'strong' version of a claim for teaching philosophy is advanced and taken up as a coherent school or college policy many individual claims will have been acceded to. [41] Staff will subscribe to such propositions as that: philosophy has primacy as a discipline above all others, or that it is the subject which provides the standard of rationality for other subjects, and lies behind all subjects. Agreement with the various dispositional and values claims will also tend to reinforce the case for whole school or college policy.

The response to such claims will often result in both philosophical and pragmatic decisions concerning curricula, pedagogy and management aspects of school or college life For example, a considerable amount of embedded teaching of philosophy topics, critical and transferable thinking will be undertaken with children within each of the specialist subjects. Specialist philosophy teaching will increasingly be available to children as they move up the school, together with the opportunities in critical, transferable and creative thinking (Appendix 6). Possibilistic thinking will be given emphasis throughout, both in subject areas and cross-curricular approaches.

If the 'strong version' of substantial claims for a philosophical and pre-philosophical curriculum is conceded, the question of whether there should be a right to such a curriculum, and an obligation to teach it, will arise. The educational importance of such a range of provision will entail a curriculum entitlement to be taught a *philosophy and pre-philosophical curriculum* on welfare grounds (see chapter 2). Issues of access will arise sharply in any school which commits itself to a curriculum which is

to be universally available. Provision for children with special needs, for instance the 'statemented' child who has been exempted from National Curriculum assessment, will need to be decided upon with great care. Equally, the question of teaching for the gifted child who is displaying signs of early philosophical apprehension will also need sensitive handling. [42]

A rather different set of claims to those given priority in this study may prevail on the other hand. A highly selective, academic secondary school, with a crowded timetable, might see no case for introducing philosophy or critical thinking before the upper school stage. The staff view may be that philosophy is a specialised discipline not having any relationship or continuity with the rest of the curriculum or school more generally. [43] Philosophy may then be taught only to a minority, of sixth form students at A level: or, as is sometimes the case, taught within the curricular confines of A level Religious Education. A whole school policy will not be seen appropriate or relevant. This view-point is professionally defensible, but philosophically mistaken as I have sought to show.

15. Reviewing the management philosophy *(STEP 14)*

The management of curriculum, pedagogy and resources will require regular review in order to ensure a sound theoretical and practical implementation of the policy. This can also be the stage of 'reflective practitioner' review and professional self-appraisal (see chapter 8). Explicitly philosophical questions, as well as practical questions, will need to be revisited such as: Is the new curriculum policy coherent, and consistent with the management and leadership practices of the school or college? What are the ideologies which have been found in the employment and management practices of the institution? Is there a management ideology which is dominant but invisible? What is the social philosophy that informs the running of the institution? Is the college or school run as nearly on democratic lines as possible? Is the philosophy and pre-philosophical curriculum designed to meet the needs of all students, or only those who are prospective beneficiaries of higher education and leaders of society? What place has the vocational notion of transferable thinking skills been given? These and other questions raised in Appendices 1, 2 and 24 will be of particular relevance in assisting the review process. [44]

16. Selecting and organising curriculum resources *(STEP 15)*

The choice and organisation of the *curriculum resources* to be used in teaching, monitoring, and assessing the philosophy and pre-philosophical curriculum will be of central importance. That there is a profusion of resources available has been indicated during the course of the study; and considerable care will be needed over their selection.

Most schools and colleges will draw their main curriculum resources from the specialist subject areas and their schemes of work. In schools in England and Wales the requirements of the centrally prescribed National Curriculum will influence, even dominate the choice of curriculum materials. In schools and colleges providing for the older student, examination syllabuses and texts selected by boards will be an important determinant of the subject approach. Bearing in mind the various limitations laid down by examination and National Curriculum requirements, material relevant to the pastoral curriculum, and additional intervention programmes, cross-curricular projects, study skills, flexible learning, and special needs learning can be chosen. [45]

Particular attention should be paid to the search for, and the selection of material of good literary and philosophical quality. There is a considerable range of material available, especially within subject areas, which can be exploited. Generic resources for the philosophy or pre-philosophical curriculum, such as intervention programmes, or didactic fiction and popular philosophy primers, should however be subjected to rigorous examination. Claims to 'cover' the primary National Curriculum (Lake 1996, Sprod 1993) or to teach older students, through a single series or course book should be treated sceptically. Professional philosophers, for example, remain critical of attempts to introduce their subject through doxography, as the reception of *Sophie's World* (Ree 1995) demonstrated (see also chapter 3). [46]

Catholicity in one's principles of selection will nevertheless be important, for reasons argued in earlier chapters. For instance, the case for teaching philosophy with visual, imaginative literature has been convincingly argued on pedagogic and philosophical grounds (Deutscher 1987, Murris (1992, 1993abcd). The 'graphic organisers' and

visual methods recommended by Davidson and Worsham (1992), Lambiotte et al (1994) and Swartz and Parks (1994) for lesson design and presentation, should have an important place within any inventory of resources. [47] Film, video, computing software including CD Rom, and other multi-media resources, will also make a valuable contribution; for example, where narrative is to be the starting-point, or where a topic is to be consolidated through revision (Gaarder 1995, Hoff 1982, Nixon and Logue 1994, Rubin and Ramis 1993).

17. Providing for Staff Development, In-service Education and Training *(STEP 16)*

Each teacher individually, and the staff collectively, will need to reflect on the aims and purposes of education. At a least a minimum professional background for each teacher, in the philosophy of education, pedagogy and the curriculum, should be in place well before the business of formulating a whole school or college policy is seriously commenced. [48] In providing philosophical leadership to the staff, the head, senior staff, or the resident philosopher should undertake some preliminary ground-work, by arranging a programme of courses or staff development which will precede the main task. This is a matter which requires attention through INSET and initial training over the whole period of a teacher's career (see chapter 8). Undergraduate and initial training are increasingly recognised as crucial periods for conceptual development, as a growing literature on academic literacy testifies; yet there is a persisting problem that 'degree examinations do not test deep, conceptual understanding' (Entwistle and Entwistle 1991: 205).

The position taken in chapters 2 and 8, on the centrality of philosophical autobiography to the teacher as a person, professional and public intellectual, is of considerable relevance at this point. As McCann and Yaxley (1992: 59) argue, it is important for teachers to be able to 'articulate views of the current meta-assumptions of professional practice' and evaluate crucial issues in professional practice, 'examining any proposal for its epistemological and moral implications.' Staff development will be crucial in this process, and especially for subject teachers who having identified the distinctiveness of their specialist approach, will need to place it within the wider questions of transfer, generalisability and meta-thinking. [49] For

instance, Swartz and Parkes (1994) show how a 'craft' approach to the shaping of lessons through the infusion method can be undertaken. Cross-curricular strategies can then emerge.

Teachers and lecturers preparing a whole school policy may therefore require a programme of staff development and INSET at quite an early stage of the planning and curriculum development cycle. A careful *needs assessment* should be made, and members of staff encouraged to undertake training courses in particular areas of their interest. Some teachers might wish to explore the introduction of philosophy teaching, while others may be more interested in critical thinking, or programmes of intervention. Others might want to review the approach in their subject to such topics as empathy, argument and rhetoric, including pedagogic aspects involving child development or learning theory. The nationally-prescribed curriculum gives little credence to pedagogic theory in its assessment criteria, as chapter 6 showed, thus further underlining the need for INSET support and course provision.

Some INSET work should be undertaken on the various claims for a curriculum, as set out in chapters 1-5. A useful foundation will be an in-service course designed to support the whole school staff, or some members of it, in introducing the main issues which currently arise in the philosophy of education. A taught, modular Master's course will be appropriate for those teachers who wish to assume full hegemony and professional 'ownership' of the *philosophy and pre-philosophical curriculum* (Appendix 31). [50] Through such a course teachers can study for themselves the various claims for a philosophy and pre-philosophical curriculum. They can look more closely at the new knowledge in various fields such as computer-assisted learning and mental modelling (Turkle 1996). They can review their ideas of child development and learning, their approach to values education, and the conceptual frameworks of their own thinking (Donald 1992, Pope 1993). There can be supported opportunities to try out methods, approaches and resources in one's own institution.

The strictures of Maclure (1991) concerning the paucity of high quality research on the evaluation of critical thinking programmes should be borne in mind. Adey and Fairbrother (1995), reviewing the status of research in *Learning Styles and Strategies* (1995), conclude that many questions which teachers wish to ask have only been partly answered. [51] It will important, therefore, to present teachers undertaking

inservice courses, or taught higher degree study, with balanced accounts of current research on philosophy and thinking, and especially where it is inconclusive or contested. This will include such areas as pedagogy in relation to transferability, dispositions and values, and learning theory; and the continuing developments in philosophy, psychology, neuro-science and other disciplines which have been shown by this study to have relevance for educational practice.

18. Publishing and circulating a written school or college policy *(STEP 17)*

A small team or working party of staff, which includes at least one member of the senior management group, should be responsible for writing and publishing the curriculum policy document. A shortened version should be available to accompany the institutional development plan, taking the form of a statement, action plan and timetable for the introduction of the *pre-philosophical and thinking curriculum.*

These papers will act as the foundation documents for the school or college staff internally and as the basis for communication and guidance to various other audiences. [52] The institutional policy for pre-philosophical education and specialist philosophy will have been subject to consultation, and the resulting policy should be conveyed to students, parents, the local education authority and others, through the medium of the school or college prospectus, year meetings or course options evenings. [53]

It seems possible that, in England and Wales, a statement of school policy on values education may become a statutory requirement within the foreseeable future. The section of the prospectus covering values education may arouse press and media, as well as parental interest and should therefore be written with exceptional care. It should present teachers as *public intellectuals* taking a local *moderate hermeneutic* stance (see chapter 8); for example in responding thoughtfully to the multi-faith requirements of the local Agreed Religious Education Syllabus.

19. Undertaking 'reflective practitioner' evaluation and review *(STEP 18)*

As with any innovation, it will be important to conduct an assessment and evaluation of progress as the implementation of the whole school or college policy gradually proceeds. There is a large professional literature which can be drawn on in this area as has been shown in preceding chapters. The notion of the teacher as both a 'reflective practitioner' and a philosophical, public intellectual should again underpin the approach that is taken (see chapter 8).

Key questions relevant to staff development and INSET activity in formulating a whole school or college policy, and its periodical review, are:

1. Where do we stand individually and collectively, as a staff and as 'public intellectuals', on the 'strong version' of claims for teaching philosophy and a pre-philosophical curriculum?
2. What are our existing philosophical assumptions in relation to the curriculum, pedagogy and management of our institution ?
3. What implications arise for us if we accept the transcendental claim that philosophy pervades all curricular, pedagogic and organisational arrangements?
4. What importance do we attach to each of the curriculum aims which have been put forward, e.g. possibilism, cognitive or the engendering of dispositions?
5. How, if we think we should, can we begin to build a whole school approach to philosophy teaching which relates to school organisation, pedagogy and curriculum?
6. What priorities emerge in relation to our individual and collective response to the various claims and purposes that have been put forward in relation to a philosophy and pre-philosophical curriculum?
7. How do we respond to particular statutory or externally mounted claims such as arise from National Curriculum, examination boards and a wide range of interest groups, including minorities?
8. What equity and rights, equal opportunities, gender and special educational needs issues do we need to address?
9. What rights and responsibilities do the various partners, students, teachers, parents and governors, have in the enterprise of a whole school policy for philosophy, higher order thinking and a pre-philosophical curriculum?

10. How shall we communicate and consult over our policy on philosophy and the pre-philosophical curriculum?

11. How shall we work together in developing the pre-philosophical curriculum in a way which is consistent with the position we have taken up ideologically?

12. Can we therefore agree on a common framework, or canon, of rationality in our approach?

13. Shall we proceed collegially as a community of enquiry (including the students), or in some other way, in implementing our approach?

14. Who should assume leadership, institutionally and in particular areas of curriculum application?

15. What is to be our approach to each of the separate strands in curriculum development in this area, i.e. in the teaching of philosophy, critical, creative, and higher order thinking; values education in the virtues and dispositions; or problem-solving, thinking skills and study skills?

16. What is to be our approach to pedagogy in each of the content and specialist subject areas, and more generally?

17. Should philosophy be separately taught for part of the school period, or for all of it, and should there be a cross-curricular form of provision?

18. How shall we know when we have taught philosophy and the pre-philosophical curriculum successfully?

19. How should we conduct assessment - what is to be our assessment policy?

20. How do we review our progress as a school in relation to the implementation of a whole school policy?

21. What are the implication for teachers' own professional and personal development, thinking and philosophical education?

22. What is our existing range of resources and strategies for undertaking these tasks?

23. What additional resources do we need? (Appendix 24; see also Appendix 1) [54]

20. What kind of person will a philosophically educated student be?

What kind of person will a philosophically educated student be when a philosophy and pre-philosophical curriculum is fully in place? Following experience of a 'strong version' of a pre-philosophical curriculum, a student will have had a wide range of

philosophical and pre-philosophical experiences. He or she will also have acquired some particular capabilities and dispositions, such as a ready-wittedness free of sophism and inauthenticity.

In their primary schools pupils will have engaged in a community of enquiry, emphasising communicative competence and dialogic rationality in discussing philosophical questions raised or arising within the normal curriculum, including many questions asked by children themselves. All primary age children will have received some teaching in informal logic, thinking skills, problem solving and critical thinking, and possibly in philosophy itself. [55] However, most of their important experiences of the pre-philosophical will have occurred within the context of subject specialisms within an 'embedded' curriculum. [56]

Much of the pre-philosophical education of primary children will have been conducted by other means than formal teaching, through play, improvisation, community and peer-group processes, with relatively little teaching of formal technical philosophy. Children will have engaged in speculative, stochastic and conjectural, imaginative thought both within the broad curriculum and with the specialist subjects. They will increasingly be 'possibilistic' thinkers.

The primary children will have developed some valuable dispositions; and some of the personal intellectual autonomy sought by Facione and Facione (1994), Ennis (1991) or Paul (1990). They will have been involved in lessons which addressed values education, but we should not look for the acquisition of major moral virtues. Procedural dispositions and 'rational authenticity' will be present to a greater extent where school life has been constructed to enable teachers and children collaboratively to engender them (Bonnett 1994).

At the secondary school there will be evidence of continuing development and progress in all these aspects, with the teachers having a clear institutional plan, programmes and forms of teaching and progression in mind. Students can be expected to have acquired some philosophical understanding through their subject specialisms. Older students will be capable of undertaking self-reflective, possibilistic and creative thought of a 'rule bound', paradigmatic kind appropriate to particular subject areas. Some at least of this thinking will take the form of

transferring skills, including for example the approach to empathy or vocational dispositions.

Most interested students, by the age of eighteen years, will have experienced a repertoire of cross-curricular intervention, and subject-based teaching in the pre-philosophical curriculum, together with some specialist teaching of philosophy. All will have encountered some specific intervention programmes, such as the CASE, Feuerstein and de Bono approaches, or in critical thinking, thinking skills, or study skills, as part of the whole school or college cross-curricular strategy. Some students will have studied Philosophy at A level, for the Baccalaureate or similar qualifications; but all will have gained competence in higher order thinking and argument, and some access to the major topics in philosophy.

Progression in all the studies undertaken within the philosophy and pre-philosophical curriculum will have been carefully designed, taught and recorded. In subject teaching assessment will have been provided, formatively by those teaching the subject using taxonomies of assessment of a general and a subject specific nature, and summatively by both teachers and examination boards. In further and secondary education, the development of transferable thinking and 'transferring skills' in relation to vocational education will have received particular attention. [57]

Throughout these processes the role of the teacher will have remained centre stage. It will now be argued, in chapter 8, that a conception of the individual teacher as a philosophical and public intellectual is central to the enterprise of developing the *philosophy and pre-philosophical curriculum.*

Notes to chapter 7

1 For the general picture see, for instance, Schrag (1987, 1988), Thornbury (1994). For subject discussion of computing, for instance, see Papert (1980) and O'Reilly (1994).

2 See Fullan (1992: 21-28) and the extensive 'school improvement and effectiveness' literature in which notions of teacher hegemony, ownership and empowerment feature strongly; and Cowley and Williamson (1998) for an example of 'local' curriculum.

[3] The difficulty of the enterprise should not be under-estimated; for not only will philosophical expertise be needed, but 'disempowered' teachers have begun to lose confidence in their powers of curriculum development (Bottery and Wright 1996).

[4] A useful, practical model and approach is offered by Newmann and Wehlage (1993: 8-12) in their *Standards of Authentic Instruction.* (Appendix 35)

[5] These were evaluated in chapter 2. See also chapter 8, which explores the concept of the teacher as a philosophical intellectual.

[6] There is a need to be explicit at the level of the individual institution, pragmatically, because there can be organisational difficulties (Goldman 1975); and philosophically,on the grounds that a *local hermeneutic* should be sought (Gallagher 1992). The resulting policy can be represented as a *public intellectual* stance in the school's prospectus and institutional development plan (Thornbury 1994).

[7] See Hodgkinson (1983: 205). Hodgkinson posits an antinomy involving two principles. Whenever two levels of values are in conflict then the higher one should be given priority; but also that values based on principle should give way to less values in order to avoid conflict and reduce tension. He argues that little will be achieved in an organisation if principle is constantly allowed to override considerations based on lower values. Where conflict exists between values of equal standing, he proposes the difficulty should be solved by either logical analysis or dialectic. Hodgkinson also proposes that conflicts will produce 'affective tension' which will simply have to be lived with if the problem cannot be finally resolved. Ryan (1992) demonstrates how a conflict between a school's own philosophy and the National Curriculum was resolved using Hodgkinson's schema.

[8] See Greenfield (1989: 81-96) on the phenomenological stance in educational management, and especially the importance of teachers' subjective perceptions.

[9] The contribution that the member of staff who is a specialist philosopher, can make to this process, as the external 'critical friend', consultant, or counsellor, will vary. The philosopher could act as a tutor to INSET courses, for example, in relation to the value curriculum, philosophy and ideology of the school policy. There is a consultant role that the philosopher can perform as a professional ethicist (Thornbury 1996). Philosophical counselling for staff wishing simply to clarify their philosophical assumptions could be undertaken (McCann and Yaxley 1992, Rahav 1996). A professional audit, of staff philosophical expertise in research and teaching would also be desirable (Thornbury 1997).

[10] These philosophical perspectives accord with the findings of research on school improvement. Fullan argues, for example, that institutional development cannot be conducted with 'brute sanity' within the rational-bureaucratic tradition in sociology derived from Weber (in Bush 1989: 144-153). For Greenfield (1989: 81-96) 'organisations are social inventions' based on individual subjectivities - hence the responsibilities which may be laid as in chapter 8 on the individual teacher.

[11] This effect will be enhanced where pedagogic is linked to similar curriculum theory, as in the phenomenological approach to management or geography education. See again chapter 3, and Greenfield (1989: 81).

[12] See also Gutman (1980: 338-58), White (1983), and Archard (1993).

[13] The complex range of developments was examined in chapter 5. See Haydon's (1996) *Schools and Values.*

[14] Scott (1989) identifies four categories of educational accountability to which teachers are subject: the cultural, political, market and professional (1989: 11-23). A national body to represent those interested in values education was formed in the UK in 1995. See the *Times Higher Educational Supplement,* June 10th 1995.

15 See Winter (1992: 109) and in Bridges 1994: 61) for descriptions of the ASSET programme approach to this question; and also Appendix 25.

16 See again chapter 8, Winter (1992: 109-11), Thornbury (1996) and Appendix 25.

17 This proposal will find more immediate acceptance in the primary sector where theories of child development, stage theory and play are important. The secondary curriculum has more emphasised 'cognitivist' and 'phenomenographic' frameworks which appear to play down notions of childhood and adolescence. For a discussion of 'transcendental' assumed theories of childhood see Mitterauer (1992) and Aries (1973).

18 I argue that philosophy should not normally be taught as a formal, technical subject before the later years of secondary education: but that in circumstances of precocity or prodigy, it becomes a 'curriculum entitlement' (Monk 1996, Radford 1996).

19 Lack of professional knowledge and understanding of pedagogy, of child development and how learning occurs in young children, is especially evident among PGCE trained secondary teachers. The ground is covered better in B.Ed. courses for intending teachers (Entwistle 1987, Wood 1988).

20 See for instance Atkinson (1989) or Mitchell (1989a) concerning the particular issues which arise post-16.

21 Curriculum specialists seek hegemony and ownership of the pre-philosophical curriculum in their role as 'curriculum barons' (Ball 1989: 195-209). Those concerned with 'argument' in English, and 'cognitive acceleration' in science teaching, have been especially clamant.

22 'Philosophy in Australian schools has been a successful innovation because it has been integrated into language programmes', the *Victorian Philosophy for Children Association Annual Seminar Programme Report* (1991) claims. There is some evidence that the special needs teachers and pastoral specialists, who lack a curricular discipline, have been particularly attracted by critical thinking, philosophy for children, and intervention programmes.

23 Weinstein (1993a) reviews the position taken up by each of the major protagonists.

24 An example would be the use of *The Prisoner's Dilemma*, an approach originally designed for work in economic logic and game theory, but used by a range of different subject disciplines.

25 For instance, subjects in which children are taught that all knowledge is provisional, or think about cosmogony, or seek elegance of proofs should communicate with each other.

26 A 'need to know' principle will need to be agreed upon between subject and other departments, together with an agreed policy on 'who teaches what'.

27 An important principle for staff designing the pre-philosophical curriculum would be the need to work co-operatively with other colleagues while preserving a pluralistic approach, thus allowing true differences of position to be conveyed to pupils.

28 See Merleau-Ponty (1962) in the *Phenomenology of Perception: Part 1.* For Merleau-Ponty the starting point of a middle way between intellectualism and empiricism, is a dialectical relationship in which the 'body subject' is neither a pure object nor a transparent subject; it is ambiguous. Damasio (1994) and Clark (1997) provide supportive evidence from neuro-science for such an account.

29 See also Mashhadi (1997b) and Mashhadi and Hahn (1997).

30 ' Clearly, then, the intention in science education is still that 'convenient tenets' of constructivism should be a major framework for the National Curriculum, the central governmental emphasis being on the acquisition of 'knowledge'; but that the situation is much less clear in the other subjects' (Watts and Bentley 1991: 178).

[31] If the teacher decides to introduce a separate course of thinking, he or she must make a choice between those subjects which are 'content free' and those which teach procedures for dealing with practical problems' (Nisbet in Maclure and Davies: 180).

[32] This is a task which can be tackled in an INSET course, or within the framework of an accredited master's course. See Appendix 31.

[33] See the options and issues raised in *The Sir Rene Descartes School Case Study* (Appendices 22, and see also Appendix 24).

[34] Fisher (1990) caters practically for the context of the National Curriculum but neglects analysis of its overall content and pedagogic assumptions in his discussion of 'Teaching for Thinking Across the Curriculum'. Fisher's (1995) *Teaching Children to Learn* concentrates on a range of learning strategies rather than a coherent, whole school approach and curriculum mapping of thinking within the National Curriculum. But he does identify the need for any such programme to take account of school improvement strategies (148-9). There is developing interest in the US, the UK, and Australia in whole school and college strategy (Thornbury 1994b).

[35] An example of such a syllabus is that of Plume School (1994).

[36] Each of these schemes could have some contribution to make to whole school policy although, as Craft (1991: 190) reminds us, evidence of the transferability from separate courses is not particularly encouraging. See also Craft and Weller (1983) and Nisbet (1989). One difficulty is that the measurement of cognitive benefit is not straightforward. Adey (1989: 240-249) claims, for instance, that the transfer of generalised thinking skills, through science lessons, to the broader curriculum only reaches its maximum effect after some time has elapsed. Any contribution of *cognitive acceleration* to philosophical thinking remains undemonstrated. Stimulus materials (Hofstadter 1985, Smullyan 1978) in self-referential or logical thinking have great appeal for some students. My own conclusion from classroom trials is that there is a place for the use of 'thought experiments'. One can combine general work in logical puzzles, with a series of short narratives or puzzle cases. Self-referring paradoxes such as 'The Statement in this Box is a Lie', or 'I like her cooking' (from Chomsky's generative grammar), which the children examine for multiple meaning; or defining a chair (as a seat for one person to sit on) - provoke thoughtfulness and creativity of response. The De Bono materials, the Science Research Associates (1981) *Think Labs Kits* and other similar materials (such as Bicknell 1987, Lake 1996, Murris 1992, and Sprod 1993) make good starting points. See Coles and Robinson (1992), Hunter-Grundin (1985), Lipman (1992) and Splitter and Sharp (1995) for rationales of the various approaches.

[37] *Paper* given by Shayer at the University of East Anglia 3rd Conference on Critical Thinking, University of East Anglia, April 1994.

[38] See Bryan and Assiter (1995), Annett (1989), and Winter (1994).

[39] The approach to study skills and flexible learning has been seriously under-conceptualised (Waterhouse 1990). The *pre-philosophical curriculum* as described in this study could provide such pedagogic and conceptual foundations thus reducing the isolated position occupied by study skills in curricular organisation.

[40] Marton (1988) pin-points the need for a more adequate conceptual account when he attempts to distinguish between learning skills and study skills on the grounds that the former is concerned with the process of learning, and the latter simply with performance within a unit of study.

[41] Interest is likely to be motivated by national concern for improved critical and higher order thinking to contribute to school effectiveness and improvement. The commissioning by OFSTED of a study of *Learning Styles and Strategies* (Adey and Fairbrother 1995) provided a hint that pedagogic as well as curriculum hegemony might increasingly be sought by the educational agencies of central government.

[42] How exactly would one respond to a young Radford, Goethe or Russell raising philosophical questions in one's classroom? Teachers should be prepared to 'scaffold' a teaching response to early virtuosity and precocity in the child prodigy, not least because the neuro-scientific evidence suggests, and some philosophers think that philosophical thoughts may initially occur as pre-cognitive feelings or emotions (Damasio 1993, Scheffler 1991, chapter 5).

[43] Many critics took such a view originally about the introduction of A level philosophy into schools (Ward (1986).

[44] Each of these questions relate to the claims for teaching philosophy, pre-philosophy and higher order thinking surveyed in chapter 2. See Waterhouse (1990) on flexible learning; and Bryan and Assiter (1993, 1995), Winter (1992), and Winter and Masch (1996) on 'the educative work-place'.

[45] The previewing of resources, as part of the programme of staff development which supports the working out of an institutional policy, has been found to work well at an early stage of the task. See Thornbury (1994b).

[46] 'Gaarder is in the tradition of Enid Blyton. The whimsical twist in the plot does not touch the solidified platitudes that make up the philosopher's gratuitous course. His unthinking identification of philosophy with civilisation and his smooth cocoon of Euro-mystical complacency emerge without a scratch' (Ree (1995: 27). However, doxographical classics such as Russell's (1946) *History of Western Philosophy*, or Palmer's (1988) *Looking at Philosophy: The Unbearable Heaviness of Philosophy Made Lighter* continue to flourish.

[47] Murris (1993c, 1993d) is strongly critical of the IAPC for not employing pictorial technique in their texts. The Canadian and US work on visual representation is more advanced in the extent of its formalisation. See Lambiotte, Skaggs and Dansereau (1993) on knowledge maps and co-operative strategies, and Davidson and Worsham (1992) on visual aids and 'graphic organisers'.

[48] For example, some familiarity with the arguments of John White in relation to the aims of education and the good life both before and after the introduction of a compulsory National Curriculum (White 1973, 1982, 1990), or the rather different neo-Thomist perspective of Walsh (1993) in *Education and Meaning: Philosophy in Practice.*

[49] Adey (1994: 157) argues that INSET with a strong theoretical base is crucial to giving teachers 'ownership' of their methodology.

[50] See Fullan (1989) for a formulation based on *school improvement* theory.

[51] This was a short study and so omissions were inevitable; but the balance of coverage is curious. Critical thinking and philosophy for children are not discussed in-depth, while Gardner's theory of multiple intelligence is given generous, albeit sceptical coverage. There is no treatment of theories of argument, empathy or phenomenography.

[52] These would include other staff, non-teaching staff, governors, parents, students, LEA advisers and OFSTED. In relation to secondary schools or colleges, some would argue that local employers should be involved in view of the need for improved transferable thinking in the workplace (Bridges 1994, 1996, Bryan and Assiter 1993, 1995).

[53] Corson proposes that school policy could be based on Bhaskar's conception of discovery (Corson 1990b: 267). Hodson (1988: 11) urges teachers to follow a Kuhnian approach to curriculum development, as 'active constructors and reconstructors of their own curriculum knowledge rather than as passive recipients of transmitted curriculum wisdom.'

[54] Appendix 1, it will be recalled from chapter 1, sets out the philosophically related questions of principle which arise concerning the approach to a philosophy and pre-philosophical curriculum.

55 Accounts of a range of primary work in this area reported by primary and secondary schools can be found in Andrews and Costello (1992: 60-90). See Andrews 1989, 1993, 1997, and Andrews ed. 1997); Costello 1988b, 1989 and Costello ed.1988a; and Mitchell 1992a and 1992b, for a fuller picture of work on 'argument and rhetoric' by those in the English teaching tradition.

56 This was the transcendental philosophical position argued in detail in chapter 3.

57 See Bryan and Assiter (1993, 1995) on work-related 'thinking' in further education.

CHAPTER 8

The teacher as a public, philosophical intellectual.

1. The case for a strong version of the philosophy and pre-philosophical curriculum

A main argument of the thesis can be re-stated at this point as follows. A strong version of a philosophy and pre-philosophical curriculum should be adopted by each individual school or college (chapter 6). The question of whether to teach such a curriculum is made redundant by the transcendental claim that it is 'embedded' and taught already (chapter 3). Each subject teacher is teaching philosophy, despite themselves as it were, through their classroom practice. Part of a teacher's professionalism and training is to work out a position on the aims of education, and the place of philosophy and pre-philosophy within the curriculum.

The importance of both subject and cross-curricular teaching in the primary and secondary school, and college should be emphasised. Philosophical thinking is often carried on in a way which is subject specific to the content areas but transferable thinking approaches can be distilled out of that context. Whatever their personal or

professional philosophical stance, all teachers should be encouraged to adopt the philosophical pedagogy of 'possibilist thinking'.

A whole school or college policy for the *philosophy and pre-philosophical curriculum* should therefore be devised which covers cross-curricular, specialist subject and philosophy teaching. Each teacher should appraise the main claims for a philosophy and pre-philosophical curriculum and decide on his or her own position. [1] Following debate and consensual negotiation at departmental level, a whole staff forum should decide upon the institutional policy. This will involve a programme of staff and curriculum development within the institution which sees the school or college as a democratic community of enquiry. A *philosophy and the pre-philosophical curriculum* seeks not just good thinking, but also values education engendering a modest range of dispositions and virtues.

Greenfield's (1989) view of school organisations as 'social inventions' based on individual subjectivities, and Hodgkinson's (1981, 1983) account of philosophical leadership in schools put particular responsibilities on the individual teacher. The preferred role of the individual teacher or lecturer, already identified as modelling 'classroom thoughtfulness', will be expanded in this chapter into that of *professional, public and philosophical intellectual.* [2]

2. Professional autonomy and liberal individualism

Despite the importance of communities of enquiry, social learning and the inevitability of control of the canon by a scholarly community, it is the liberal individualism of each teacher, in choosing how to approach the *philosophical and pre-philosophical curriculum,* to which most significance should be attached. The conception of the individual teacher as a responsible intellectual having personal and professional continuities of identity is foundational. [3] Wollheim (1984), Radford (1996) and Schechtman (1996) emphasise the importance of 'living as a person' with an 'examined life' of 'self-constituted narrative', reflecting both notions of philosophical autobiography and Kierkegaard's dictum that life must be understood backwards but lived forwards.

Wollheim's 'self concern' with possibility in the dispositions, Johnson's emphasis on 'moral imagination', and Keke's (1993) emphasis on 'valued possibilities' can each be seen to echo the philosophical point. [4] It is for the individual teacher of philosophy to take up his or her own individual stance on the question of whether specialist philosophy is to be separately taught. But each teacher, and especially the generalist, will need to have an individual, including ethical understanding of how philosophical topics are to be managed in a cross-curricular way, within the context of a prescribed or national curriculum.

The role of the teacher will vary according to the philosophical position adopted concerning the various claims for a philosophical, pre-philosophical and thinking curriculum. How the response of the individual teacher consolidates into a full picture will also vary, according to the local context of 'self-constituted narrative'. [5] Each teacher, not just the specialist philosopher, will face a range of problems and challenges as a public intellectual, as an individual professional, and as a person with regard to the *philosophy and pre-philosophical curriculum.*

What is unquestionable, however, is that the individual teacher involved in any 'strong' version of the philosophy and pre-philosophical curriculum will take up a public role and stance. The individual teacher cannot decide alone what is to be done in the classroom, because of the demands of various kinds of professional, political and public accountability (Scott 1989, Starratt 1994). Account will have be taken of national, local authority, professional or subject association, or diocesan viewpoints; and of regional or local policy structures which extend beyond the individual school (OFSTED 1994b; SCAA 1994, 1996).

A number of pedagogic and ethical issues relate to the proper, professional implementation of the curriculum policy as it is translated into actual teaching practice by the individual teacher. These may be to do with individual students, or they may be to do with public policy in education. In England and Wales, for example, developments in values and moral education will require cautious assessment in response to what schools and colleges are being asked to do. [6] Each teacher exercises a philosophical responsibility within the 'public' and 'ecological' life of the teaching profession, not least in resisting the 'de-professionalisation' of one's role as a professional public intellectual (Bottery and Wright 1996). [7] These issues will now be examined further.

3. Professional autonomy and cultural pluralism: philosophical issues in pedagogy

The pervasive and embedded nature of teachers' assumptions presents a complex pluralism and considerable problems of identification, as discussion of the transcendent claim showed in chapter 3. As Elbaz (1991) argues, much of teacher knowledge is the 'high-context', hermeneutically-located, *tacit* knowledge described by Polanyi (1973); and there could be a danger in theorising, of turning it into researchers' knowledge, 'colonising it and thus silencing the teacher' (11). Shils (1995) points out that such tacit knowledge also possesses its own authority. Pope (1993), Day et al (1993), and Morrison and Ridley (1989) each show the extent to which the teacher is located in a matrix of concerns and different ideological contexts, which are reflected in practice in a range of dilemmas, intuitive theories, image, voice, metaphors and beliefs (Appendices 29 & 2).

There are convincing grounds for encouraging such pluralism. First of all, given the existence of 'contested' philosophical ideas (Gallie 1964), pluralism is inevitable in the approach to the philosophical or pre-philosophical canon, critical thinking or philosophy for children (see again chapter 7). Secondly the research evidence, for instance in relation to generalisability and transferability concerning philosophical and other thinking, is susceptible to competing interpretations. Thirdly, specialist teachers of subjects will contribute a particular perspective on philosophical understanding to the general school policy. Their contributions are to be especially valued, since it is from the subject areas that distinctive types of thinking, including the metacognitive discourse of *philosophy*, are frequently first generated. It is within subject disciplines that developments of value to others are often likely to occur (see again chapter 2). [8]

The role of the subject specialist, and the importance of intellectual autonomy in teaching that subject, therefore remain central to any policy or approach in pre-philosophical or higher order thinking. Cultural pluralism across subject departments, offering 'contested', and hermeneutically shifting accounts of 'thoughtfulness' in the specialisms is well worth maintaining, even at the cost of some occasional, minor inconsistency in the institutional policy. Some teachers of specialist subjects will want to develop only the particular philosophical expertise needed for teaching their subject. They may not take a more general view of what the philosophical curriculum

is or should be. Others will subscribe to some 'strong version' of philosophy teaching based on the claims identified in chapter 2. However, specialist teachers cannot expect to be absolved from the professional need to collaborate with others, including fellow specialist teachers, on common, cross-curricular and pedagogic frameworks. A coherent, institutional approach will make teaching, and the experience of the students, much more comprehensible and effective. [9]

4. Pedagogy and technical philosophy

Some particular issues arise from the nature of philosophising as a shared, oral or dialogic or group experience. For example, pedagogic opportunities arise for utilising 'teachable moments', teaching the subject by 'ordinary language' methods and speech rather than as a formal, written subject. [10] MacIntyre (1984), taking the emergence of Enlightenment philosophical tradition as an illustration, describes how an unavoidable move towards technical philosophising arises in the context of any culture. Problems initially formulated in directly apprehended language are reformulated in more sophisticated and complex discourse. Any such area of expertise or connoisseurship, such as philosophical thought, typically acquires a technicity, a history, and a canon (see chapter 6). We readily accept that the teaching of technical concepts and language will occur with philosophy for older students at A level, or in the Baccalaureate. However, a difficulty arises over how far technicity in treating philosophical topics should be introduced within a *pre-philosophical curriculum* for children. [11]

It is difficult to confine philosophical dialogue with older or able children in the classroom to natural language or vernacular discourse. If the natural language rubric is observed scrupulously, the point is invariably reached at which it proves an impractical method of proceeding with a philosophical discussion in depth. At that moment, which will vary according to the context of the individual children, group or classroom setting, the teacher will feel impelled towards teaching in a specialist or technical manner.

This can be illustrated by an example: the case of two teachers examining a moral dilemma with students within one of the philosophy programmes of the *Institute for*

the Advancement of Philosophy with Children? Suppose a first teacher, a trained philosopher, is aware that students have begun to raise the technical questions in moral philosophy of: 'which rights carry reciprocal obligations?' and 'should moral conflicts be treated as singular instances?' [12] She could at this point teach the formal distinction between 'act' and 'rule' utilitarianism, for she does possess the necessary philosophical expertise. However, she does not intervene to teach that distinction, since teachers trained by the IAPC method have to refrain from teaching informatively or technically, their role being facilitative only. Consider a second teacher trained solely by the IAPC method, who lacks a formal philosophical training and technical knowledge of terms in moral philosophy. He would be unaware both of the opportunity and the need for extending technical understanding. Here the position of transcendental realism taken up in chapter 3 takes on renewed relevance: for there is always a level of knowledge to which students will need access, which should not be denied to them by our teaching stance or our lack of expertise.

The problem arises especially sharply in the primary classroom, where philosophical topics can rarely be addressed at the adult, technical level, and the teacher must be thinking along parallel and complementary philosophical lines to those of the child. For example, Cam (1994a: 7), in following the IAPC approach, claims that the provenance of a philosophical topic in his teaching materials (he gives the example of Putnam's ' brain in a vat') will be 'readily identifiable' by primary teachers. There must be doubt about such a claim, however, except where a teacher is known to be already philosophically literate. [13] There is, then, an issue in pedagogic ethics about how far teachers should be philosophically trained to give students technical access to the *philosophy and pre-philosophical curriculum.* [14]

5. The pastoral aspect of pedagogy

There is a further problem concerning the moral philosophical position of the individual teacher in relation to professional ethics, pedagogic and curriculum policy. [15] Each teacher will have to consider carefully whether the educational, intellectual and emotional welfare and flourishing of students will be promoted by a particular intervention or set of interventions. [16] Transcendental modal realism claims that many key things to be learned lie beyond immediate appearances and out of the reach

of intuition or casual ratiocination. It will be the teacher's moral, as well as pedagogic responsibility, to choose what to teach or reveal of what is not known or is hidden. The curriculum, pedagogy and organisation of pre-philosophy and philosophy in the school or college will be the outcome of such choices.

For example, it may not be developmentally correct to introduce, or lead students into certain understandings before a certain age. Mismanagement of one's ready-wittedness in the quick-silver transformations between facticity and transcendence in a philosophical conversation carries the constant hazard of 'inauthenticity'. For instance one might respond with inappropriate *ironism* to a young person - or too seriously!

The issue of whether children or students should have a right of access to all morally or pedagogically accessible possible worlds is therefore an important one. It follows from the transcendental claim that teachers should seek to initiate children into philosophical understanding and speculation - and reaching those goals by themselves through play, whimsicality and 'assisted performance' in their thinking. Yet this technique may conflict with other rights and duties connected with open-ness in declaring one's philosophical position, or relating to the vulnerability of young people. Teachers will need to give regular thought about their philosophical and pedagogic practice on this matter.

Pedagogically, it may be desirable to act as if there are rational moral, aesthetic or epistemological curriculum claims which can be confidently asserted within classroom life (Stenhouse 1977). One may feel obliged to praise particular set books as constituting part of the literary canon (Bloom 1992, Brann 1993), in a view professionally propounded but not held personally.

The point here is that in order for children and young people go forward with reasonable confidence in their lives, they may need to be temporarily encouraged to hold some mistaken beliefs. Psychological research has suggested that children 'telling lies' may even be essential to their moral development in having a sense of separate identity (Gold 1993: 49). The teacher may also be involved in the invoking of *vital lies*, as philosophically conceived by Schiller, Nietzsche or Kierkegaard. Judgement on the part of the teacher concerning the use of *vital lies* raises issues both of pedagogy and personal authenticity. [17] The form of pedagogic pretense needed

will not always easily be distinguished from bad faith, inauthenticity or false consciousness (Audi 1995: 852). Newmann (1990) and Katz (1993) argue that in order to help students succeed with higher order challenges, teachers themselves should model thoughtfulness as they teach. They therefore also have to make clear to students who spot teacher 'inauthenticity' that the grounds for employing vital lies are philosophical and educational.

Teachers with pastoral responsibility for groups of children, for instance form tutors and pastoral year heads, may want to have a distinctive approach to teaching dispositions; one based as much on relationships and group processes as much as on philosophical content. Values education in health or citizenship, raise particular demands related to the links between thought and feeling, cognitive emotion and personal embodiment in the formation of the dispositions (see chapter 5). Emphasis can be naturally placed here on a curriculum which is, pastorally, neo-Aristotelian (Assiter 1994), hermeneutic (Atkins 1988), post-modern (Kincheloe and Sternberg 1992) and multi-sensory (Merleau-Ponty 1962) in its approach to the 'body-self'. [18]

6. Cognitive emotion and the case of Mill

Among the original objections to the teaching of philosophy, it will be remembered, was the idea that it might produce depression or tend to increase a state of mental illness. [19] Child development theory, including counselling and perhaps psycho-analytical theory, in relation to the pre-philosophical curriculum needs to take this unusual risk into account. There will be a need to have thought out carefully one's approach to the moral issues, such as the question of disclosure, surrounding the heuristic aspect of the teaching role. At one extreme this might involve the teaching technique for handling philosophical issues with, very sick or bereaved hospitalised children (Bluebond-Langner 1980, Matthews 1994). Here a rush to provide philosophical insights about death could be as tragically inappropriate as the officious holding back of truth. Equally, within a conventional classrom, a teacher could make the epistemogical misjudgement of assuming that logical insights can be conveyed on the blackboard in five minutes of exposition, rather than by classroom dialogue and the working through of examples. These principles of pedagogic ethics will be the especial concern of a responsible teacher.

Some philosophers argued at the time of the inception of the A level in Philosophy that to introduce young people to philosophical thinking would lead to disillusion or depression among them. It was doubted whether sixth formers were emotionally or intellectually mature enough for the study of philosophy. Would not intellectual doubts raised by Russell, Ayer, or Sartre about knowledge, understanding, or standards, be confusing for young people still struggling to master the traditional disciplines? Could belief in free will or religious belief be threatened in a way that might leave a student 'bewildered, depressed or suicidal' ? (Ward 1983: 260). This is not a trivial issue. Adolescent depression in many students, when it occurs, takes the form of free-floating anxiety and de-personalisation. Concern about one's identity, purposes, and 'the meaning of life' is especially prominent even among normal young people, especially the well-educated who have encountered such ideas in their reading and studies. Furthermore, the schizophrenias, which often have their onset in young adulthood, are specifically described by the medical profession as forms of 'thought disorder'. However, no clinical or epidemiological studies of adolescent depression in relation to philosophy teaching have appeared so far in the psychiatric literature. [20]

The interaction between thought and feeling and argument can be seen at work particularly clearly in the celebrated emotional and philosophical crisis suffered in 1826-7 by John Stuart Mill. What occurred to Mill (Mill 1964) would at first sight appear to be a cautionary warning against philosophising in adolescence. However, it should be argued that this well-documented episode of philosophical doubt was engendered and cured by both intellect and emotion. Mill experienced a crisis of *cognitive emotion.* In *A Crisis in My Mental History, One Stage Forward,* Mill records the 'melancholy winter' of 1826-1827 as a period when he fell into a deep depression, some months in duration, which originated from a realisation that he would not achieve happiness, even if all his objects in life 'the changes in institutions and opinions to which you are looking forward.. as a reformer of the world..could be completely effected at this instant' (106-7). Of his response to this realisation, and the turbulent emotions which accompanied it, Mill wrote: 'I sought no comfort by speaking to others of what I felt. If I had loved any one sufficiently to make confiding my griefs a necessity, I should not have been in the condition I was' (108). [21]

In discussing this episode, psychologists and psycho-analysts - and some philosophers - have tended to emphasise the unhealthy dominance of an authoritarian father-figure and a lack of education of the emotions. [22] Mill's problems and his

solution, after all, closely fit classical psycho-analytical theory. There is an important philosophical point here, however, which supports the notion of 'cognitive emotions'. The evidence of Mill himself at the time of his crisis suggests that his 'thoughts' as well as 'feelings' may have been intrinsic to his distress. His solution to his problem was both intellectual thought, and feeling which accompanied or was released by it. [23] For unable to confide in his 'stern and unbending father', Mill in fact recovered after reading a section in Marmontel's *Memoires*, in which Marmontel recounted his ambivalent feelings upon the death of his father (Mill 1964: 111). He was deeply engaged in, and had worked through a crisis of both thought and feeling - of cognitive emotion.

The question of how far and when to introduce children or students to concepts in philosophy is critical in such contexts. A sensitive interpretation and application of the welfare right to be taught philosophy will have the especial vulnerabilities of two kinds of pupils in mind. The distress of the philosophically depressed student can be ameliorated by philosophical reflection, as in the case of Mill. But equally, there will be a risk of exacerbating the condition. As Applebaum (1995) wisely reminds us, trust in classrooms is paired with 'vulnerability'.

Sensitive teaching also needs to be available to help in reducing the isolation and metaphysical bewilderment of children who show signs of philosophical precocity, in the apprehension of the ineffable, or other 'cognitive emotions'. The philosopher, Radford (1996) describes the 'dizziness' of an experience of metaphysical perplexity which occurred to him at the age of five years. [24] Philosophically precocious children experiencing these early metaphysical and existential apprehensions, which illuminate possible but inexpressible worlds, may need technical and pastoral teaching (Mohanty 1987, Moore 1992). For as Cooper (1992) points out, in discussing Wittgenstein's notion of 'inexpressible background', these are times at which the 'security of everyday descriptions of the world evaporates' in the face of the ineffable.

A schema of professional ethics will therefore be required in one's relationship with students, one which is personally chosen yet congruent with the broad policy of the school or college in the philosophical and pre-philosophical curriculum. This should also cover the approach to professional ethics in dealing with colleagues. Schemes of professional ethics under development in the cognate professions of nursing, public health, and social work, give some idea of how this can be done (Winter 1992, 1994,

Appendix 25). [25] Some concerns of professional ethics, for instance the approach to collegiality as a professional virtue, are especially relevant to educational institutions and require the growth of particular expertise and policies through staff development (Little 1985, 1990). There will be an important place here for leadership in the new discipline of philosophical counselling as suggested earlier (Rahav 1996).

7. The question of authenticity

The objection to the teaching of philosophy because of its potential for abuse by students offering facile or inauthentic views was discussed earlier in relation to the ideas of Plato, Paul and Sartre. [26] Each teacher will need to make a judgement about the individual authenticity of students in their thinking and philosophising, as to whether they are sophistical or serious, facile or genuinely empathetic. The specialist teacher of philosopher acting as consultant to the staff will also encounter similar problems concerning authenticity or *mauvaise foi* with colleagues. [27] One will need rigorous ethical criteria, for instance, for judging what constitutes authentic collegiality (Ihara 1988, Little 1990, Wallace 1989, Thornbury 1996); and for avoiding what has been characterised as 'contrived collegiality' (Hargreaves and Dawe 1990). The same considerations of ethical propriety will apply with colleagues as with students, in how the philosophical concepts of vital lies and folk psychology are handled.

Philosophical insight and expertise concerning issues of professional ethics should therefore be available to staff (Haydon 1996). The in-house philosopher should expected to act both as professional ethicist (Thornbury 1996, Proefriedt 1985) and philosophical counsellor (Rahav 1996). Sartre's (1958) phenomenology, and particularly the notions of facticity and transcendence, provide a possibilist account of how one might proceed over professional authenticity. The relationship that 'bad faith' has to the self, mental health or psycho-pathology of the learner, is a pastoral matter which must be borne sensitively in mind. Sartre's account matches closely that given by some philosophers of education (Bonnett and Doddington 1994, Cooper 1983).

> While bad faith has some common elements with a lie, it is, Sartre notes, fundamentally different. Bad faith is lying to one's self, and thus the very difficult thing to understand is how, being conscious of our lies, we can believe them. (Catalano 1985, 79-198).

Dunlop (1984) draws attention to the need for authenticity, agreeing with Sartre and Pfander (1922) that while the inauthentic person does not intend to deceive, inauthentic thinking seems to be special temptation for the intellectual. The sophist does not intend to deceive; but derives enjoyment, for example, from competing in argument. However, Romano (1980) is right in saying that the problem does need addressing, that Sartre's notion of spontaneous freedom would seem to rule out any continuity of human action.

That the problem of authenticity frequently arises with students' thinking is apparent in Facione and Facione's (1994) insistence on a critical thinking measure for penalising intentional bad faith, 'close-mindedness', 'superficiality' and pursuit of one's own interests (Facione and Facione 1994, Appendix 19). [28] The temptation to elicit inauthentic precocity, by the premature introduction of material at too high a level of emotional or developmental difficulty, will also need to be avoided. Some argue that an approach must begin early, in the child-centred primary school which incorporates an existential approach to 'authentic rational thinking' (Bonnett 1994: 118-128).

The implications of these ethical considerations are important in relation to the rights and responsibilities of the teacher. Teachers have to be responsible in organising and pacing the introduction of philosophical ideas and content - if only to avoid that forcing of the intellect at the expense of emotional development which proved so costly for the young Mill. There is a particular obligation in relation to the philosophically precocious student. Cooper (1983: 12) and Bonnett (1994) argue for a connection between self-expression and the pursuit of authenticity in pursuing this task. To understand a situation is also to understand the action it calls for and thus, Bonnett claims, to stress a form of education for free-will which will enable people to express their nature.

8. Accommodating reservations concerning 'ironism'

An important question, related to 'authenticity', is raised philosophically by Rorty (1989, 1995) and Arendt (1971, 1978); and much discussed by teacher educators (Quicke 1992, McNamara 1990). It concerns the sociological notion of professional distance and the philosophical concept of *ironism*. Arendt (1978) argues that any serious attempt to think entails stopping whatever else it is that we are doing. It requires, necessarily, having recourse to concepts or categories which are removed from direct sense perception. Thinking could, consequently, lead to paralysis or a disinclination to act, as in the case of Hamlet or Mill, through thinking too much on the event. Thinking is 'out of order' not merely because it stops all the other activities so necessary for the business of living and staying alive, but because it inverts all ordinary relationships: what is near and appears directly to our senses is now far away and what is distant is actually present. [29] Thinking about thinking by teachers, for example, would be likely to foster the ironic style of thought.

Rorty describes ironism as a generic trait and 'spectre which haunts the intellectuals'. It involves the re-description of human activity in a way which thereby humiliates the actors (Rorty 1989, 1995). The *ironist* is someone who has radical doubts concerning the threatening power of her own vocabulary, and that of others, ironically to re-describe the world. [30] The ironic re-description involved in serious thinking makes for a tension between the thinker and the professional practitioner, who must always be seen as active and sympathetic. The professional and linguistic devices of ironism used by medical and other professionals to distance themselves from human distress in order to deal with it have, for example, been extensively described by sociologists (Goffman 1961, 1970).

McNamara (1990) claims that the induction of teachers into theories, concepts and language of the academic view of education, reflecting ironism, could impede improvement in the quality of teachers' thoughts and practices. [31] A stance of ironism on the part of the teacher or teacher educator could deny or delay hegemonic action, thus working against the empowerment, skilling or professionalising of both teachers and taught. In *Contingency, Irony and Solidarity,* Rorty even argues against encouraging the public dissemination of the ironist stance beyond the professional circles of philosophers.

However, Conway and Seery (1992), Depp (1995), Egan (1997) and Quicke (1992) all perceive social and educational value in an ironist stance. Quicke argues, for instance, that a variety of positive teaching responses is both possible and necessary; and while ironic thought 'is not for the fainthearted', what could the alternative be?

> We would not wish teachers to remain uncritical of firmly held views about teaching and learning, for instance, just because others were committed to them as absolute truths; or to be 'unconscious moralists and metaphysicians'. (315)

Egan (1997: 156-7) sees ironism as helping to keep in check an over-reliance on the Enlightenment claim to provide a form of discourse in which knowledge, truth and objectivity are given privilege. Self-awareness and reflection are essential to the teaching role; and, as Morton (1969) shows, ironism can reflect and inspire moral vision, commitment and utopianism. Possibilist thinking can be seen be an important pedagogic technique in challenging unproductive ironism. Post-modern playfulness and cognitive tentativeness, the dialectical encounter between engagement and ironism, clarify 'situatedness' in relation to choice (chapters 4 and 5). The *hermeneutic of suspicion*, which Conley (1993: 22) claims has been the foundation of the critical thinking approach, can then be replaced by the disposition and *hermeneutic of appreciation.*

The importance of *narrative*, established in chapters 3, 4, and 6 in relation to the transcendental claim, the construction of counter-factual and possible worlds, and the idea of a canon, now re-emerges in relation to the way the teacher or lecturer should carry out their role as public intellectuals.

9. Narrative, reflexivity and teachers' lives

Implications for teacher education arise with the adoption of *a philosophy and pre-philosophical curriculum* which merit serious consideration. As Adler (1991: 139) points out, while the notion of teachers as reflective practitioners has permeated the discourse of teacher education, 'an apparent unity of approach to this theme in fact masks a diversity of meanings and approaches.' These reflect differences in, and sometimes dilemmas over epistemological, ethical, and even metaphysical and

aesthetic stances (Lyons 1990). This phenomenon, in the form of the *inferred canon*, was traced in chapter 6.

Schon's (1983) influential notion of the *reflective practitioner* envisages one who can rise to the challenges of pluralism and ironism. Such a teacher can think while acting, and is able to respond to the uncertainty, uniqueness and conflict involved in the situations in which professionals practice. Schon gives a transcendentalist account of reflection.

> Reflection-in-action is a more rationalised and more systematic form of thinking in action which is necessary when the 'smoothness' of practical action is for some reason interrupted. It involves making explicit the hidden assumptions which underpin practice and articulating the tacit knowledge which enables participants to 'get by' in everyday life. In both the social world of the academic and the teacher, reflection in action will be stimulated by enquiry or research activity which is not just puzzle-solving (see Kuhn 1970) but challenges the existing parameters of knowledge in action. (Schon in Quicke 1992: 317)

Schon (1983) like Quicke (1992) distinguishes between 'knowing in action' and 'reflection in action', 'knowing in action' being thinking as usual which deploys knowledge which is not consciously reflected upon. Cruikshank (1987) also sees 'reflective teaching' as something of a pragmatic ability, the ability to analyse one's own teaching practice. Smyth (1987) describes such a process as both ethical and epistemological; the teacher being said to become aware of herself or himself, as an agent having a 'sense of agency'. O'Loughlin and Campbell (1988) argue that any 'reflective' critical pedagogy must begin with examination of the pre-existing beliefs of the prospective teachers (Appendices 23 & 29). Laird (1988) envisages a feminist, critical pedagogy along such lines.

Some teacher educators place especial emphasis on the narrating of their own personal and professional worlds by teachers, as an image of professional practice. Clandinin and Connelly (1990: 241) argue that teachers need to concentrate on personal narrative, and the self-picturing of their professional lives, as opposed to the discourse of 'technical rationalism' which they have been compelled so often to use. For Clandinin and Connelly, the importance of narrative is as the 'professional memory of reflective practice'. It will be recalled that memory is seen by Bloom as the real foundation of a canonical perspective (see chapter 6). [32] Schechtman (1996: 159)

argues for what she calls 'narrative self-constitution', partly on the grounds that 'a person needs a narrative self-conception in order to be an agent at all'. Schiffrin (1996) and Johnson (1993) demonstrate notions of the conditional and counter-factual to be central to both narrative self-portraiture and moral imagination (see again chapter 5).

The notion of 'voice' is prominent in discussion of how the emancipation of teachers is to be achieved. Grumet (1989, 1990), in looking at the idea of women teachers as philosophical intellectuals, identifies the concept of 'voice' as having a major contribution to make to an evolving rhetoric of autobiographical praxis. Elbaz (1991:10) links this with the notion of 'audience'. Having 'voice' implies that one has a language in which to give expression to one's authentic concerns to an audience of significant others. Similar arguments are made for the reflexive dispositions needed in caring professions. [33] Winter (1994) and Winter and Masch (1996) present a characterisation of good practice in the health service which features the cultivation of reflective, professional and vocational dispositions (Appendix 25, chapter 6). Benner's (1984, 1994) approach to nursing education in the U.S. emphasises narrative, 'interpretive phenomenology' in critical thinking which models good professional practice. [34]

Zeichner (1983) attempts to synthesise a taxonomy for developing or identifying 'teacher thoughtfulness' and reflectiveness from these broad sets of claims. He sees the individual teacher as an intellectual possessing three different levels of reflection (1983: 33-9). At a first, *technical* level of teacher reflection the emphasis is on the efficient application of professional knowledge to given ends. A second level of reflection places teaching within its *social and institutional context,* looking at why, for instance, certain choices of practice are constrained or influenced by institutional, social or historical facts; or identifying hidden curriculum which may be embedded in practice. A third level of reflection introduces *moral and ethical issues*, when thinking about teaching and learning is guided by concern for justice and equity, teachers transcending everyday experience to become the 'transformative intellectuals' sought by Giroux (1988). [35] Zeichner's account of theory and praxis in teaching gives support to the claims of those who, like Assiter (1994), assert that good thinking consists partly in competency in practical knowledge. [36]

10. The importance of philosophical autobiography

Should philosophical autobiography, as with Mill, be a central device in the student's and the teacher's learning and teaching of thinking, argument and philosophy? For Schechtman (1996) 'a self-constitutive narrative of selfhood' is essential for each person, since: 'to have an autobiographical narrative is thus to have an implicit understanding of one's history as unfolding according to the logic of the story of a person's life' (113-114). Warner (1984) argues that the autobiographies of philosophers confirm that the processes by which important thoughts are arrived at, are illuminative of those thoughts themselves. The most interesting cases are the confessions of St. Augustine or Rousseau, or the 'reflexive autobiographies' of Mill or Sartre, in which:

> Personal and philosophical development are presented together, with one informing the other, where the model of man is explicit, where the story covers the period up to and including the adoption of the writer's perspective, and where it is intended both to enact that model and thereby to lend some support to it. (194)

The case for the philosophical importance of biography has enjoyed strong support among philosophers themselves, Warner claims. For example, Dilthey, progenitor of the hermeneutic tradition in the writing of history, argues that in autobiography 'we encounter the highest and most instructive form of the understanding of life' (189). For Warner, the autobiography of John Stuart Mill provides the perfect exemplification of Collingwood's case that 'the autobiography of a man whose business is thinking should be the story of his thought' (201). [37]

An implication is that a teacher would need to have a philosophical autobiography as part of his or her professionalism, career and personal development. Recent research and literature on teachers' lives has emphasised notions of personal identity, experience, and educational philosophy. Goodson (1992), for example, is convinced that a more biographical focus on teachers' lives would 'reconceptualise our studies of schooling and curriculum in quite basic ways' (1992: 241-3). He offers a model of teacher role and 'biographical transformation' into which philosophical autobiography would easily fit (Appendix 5). 'The narrated life of a teacher' will, as he sees it, become a form of philosophising for the reflective practitioner. Teachers will want to take a mutual interest in and perhaps share their philosophical autobiographies. For

Bonnett (1994) the simultaneous narrating of one's life and philosophy of teaching is essential to the 'existential' process of being a teacher.

It is argued by Elbaz (1991) that the novice teacher will find that the discourse of biography and narrative will help to formulate a scaffolding of 'temporary pedagogic theory' from which one may build up to become more expert (8). On this view the process of teaching an individual child or class may be reported to others, as the narrated experience or 'autobiographic praxis' of teaching (Butt and Raymond 1987). Grumet (1989: 13-17) asserts that such critical inquiry must begin with an examination of the teacher's own heretofore unexamined assumptions, when 'autobiographical writing invites those who would teach to recover the world within which they came to be knowing subjects.' [38] McCann and Yaxley (1992) make an identical point concerning the need to uncover professional assumptions.

Goodson (1992) and Knowles (1992) explore the notion of teachers having a career in philosophical autobiography which is both hermeneutically-rooted and seeks to break out into new worlds (Appendix 5). However, Goodson (Ball and Goodson 1985) believes that the teacher should only take up a philosophical position after some years of teaching. This advice in my view is mistaken, given the transcendental claim that there is a pervasive and embedded set of philosophical beliefs and presumptions present in classroom practice right from the start of one's career. It would be difficult to be a good teacher without being a 'reflective practitioner' who addresses philosophical questions, throughout one's professional life from initial teacher education onwards. Many student teachers, furthermore, are demonstrably interested in the philosophical basis of teaching, and the aims and purposes of education. Their needs are underestimated in Goodson's proposal for a philosophy of education which is first formulated midway through one's professional life.

What is required is a coherent programme of initial, in-service education and staff development of an inter-disciplinary character which is supportive of philosophical autobiography, as well as topics in psychology, neurology, curriculum theory, educational evaluation and curriculum studies (Appendix 31). [39] However, there is such a vast world of ideas and meanings, so many philosophical questions which impinge on one's teaching and require 'teacher thoughtfulness', that there could be another response. It would be that, wherever possible, a teacher should also acquire some of the formal skills and training of the philosopher.

11. The philosophy teacher as ethicist and counsellor

The specialist teacher of philosophy, acting in a consultancy role, has a quite specific contribution to make in assisting colleagues to frame the whole school policy. This should also be seen as a commitment of some professional importance. Gallagher (1992) commends an approach employing a *local moderate hermeneutic*, when the specialist teacher of philosopher can provide significant leadership. A philosopher on the staff of a school or college can take on a key role in the individual institution. He or she can act as a professional resource, as a curriculum leader, philosophical counsellor, professional ethicist, in-service educator, committee member, contributor to staff meetings, and writer of documents in the devising of the *pre-philosophical and thinking curriculum.* [40]

The philosophy specialist in a school or college can help to assemble an overview, of the coverage of philosophical topics across the whole curriculum, mapping those areas in which philosophical topics could be most relevantly introduced. The resident Humean journeyman, or Austinian consultant can help in clearing-up confusions, together with the avoidance and misuse of philosophical ideas (Theron 1986). This can be done, for instance, through contributions to the in-service training and staff development programme (Appendix 6).

The philosopher can also provide individual counselling and advice in the 'conflict resolution' of curriculum boundary disputes. Individual teachers can be assisted to formulate more clearly their own philosophical positions (McCann and Yaxley 1992). Members of staff, individual or in groups, can be facilitated in thinking through, and formulating their philosophical answers to questions such as: 'What are the philosophical grounds for teaching philosophy, pre-philosophy and higher order thinking in a school or college?'; or 'Should philosophy or critical thinking be taught as separate subjects?' (Quinn 1991, 1994). Personal training for the resident philosopher in the new skills of philosophical counselling may be of relevance here (Rahav 1996).

After a *philosophy and the pre-philosophical curriculum* is introduced the resident philosopher should be prepared to make a continuing contribution as a teacher and as consultant, for instance assisting with departmental approaches. In a school which

wishes to develop a curriculum for the first time, the appointment of a teacher who is philosophically trained is a desirable strategy. Arrangements should also be made for one or more members of staff to acquire formal philosophical expertise through INSET. Wherever possible, the specialist philosopher in the school providing leadership in curriculum policy should possess a relevant higher degree in both education and philosophy (Appendix 31). Internal leadership should be supplemented by drawing on the expertise of other local institutions, such as university departments of education, or LEA advisory and inspectorate teams.

12. Teachers as transformative public and philosophical intellectuals

To what extent should teachers therefore see themselves as, or aspire to be philosophical or even public intellectuals? A large professional literature in teacher education, supported by a philosophical tradition which argues for a special role of *the intellectual* in the culture, responds to this question. The intellectual is variously seen as situated in the key institutions of society (Robbins 1990), as a mediating expert (Kurczewski 1990), as a Foucaultian analyst (Blacker 1991, Peters 1996), as an independent arbiter (Maclean 1990), as the opponent of dogma (Bayard 1990), as the guarantor of probity in public life and student values in education (Collier 1997), as the guardian of 'tacit knowledge' (Shils 1990, 1995), as the promulgator of a canon (Brann 1993), as a member of a humanistic elite in the case of the French intellectual (Druet 1987), and as a philosophical person (Lock 1990).

Said (1991) claims that public intellectuals who, like Chomsky, speak out, are the contemporary equivalents of the role model prescribed by Benda (1928) in *La Trahison des Clercs*. Teachers are 'organic intellectuals', in Gramsci's sense that they can fall into the error of unconsciously legitimating the society they serve. Coser (1970), Said (1991) and Shils (1990) each echo a Kuhnian notion also, in reminding us that intellectuals can only function through regular contact with those fellow intellectuals who constitute their community of enquiry. [41]

These accounts agree with Zeichner's (1983) 'levels' which depict the teacher as hermeneutically and contextually situated: as a person, as a practising professional,

and as a committed public intellectual. The second and third levels of the Zeichner taxonomy, in which the teacher takes up a moral and ethical positions, are the most important from the point of view of philosophical and intellectual life. For they place an obligation upon each teacher, as a person, to be active in the public domain. Teachers are seen as *public, philosophical intellectuals* in their own right as persons, as academics, and in respect of their responsibility as educators for the future of the society.

This type of position is taken up by other educational thinkers. Kelly (1995), for example, wishes to renew the 19th century vision of public schools as loci of public knowledge and democracy, involving teachers as public intellectuals. Aronowitz and Giroux (1991) and Kreisberg (1992)) similarly argue for the notion of teacher as a public intellectual, as someone who will need to have a set of dispositions directed towards self-empowerment.

The emancipatory theme runs through much discussion. Giroux (1988,1994), for example, perceives both teaching and education philosophically, as a source of hegemonic power along Gramscian lines. [42] Teachers are *transformative intellectuals* who can illuminate the important idea that all human activity involves some form of thinking. Flanagan (1993) similarly sees the teaching of critical thinking for the South African teacher as part of the ideologically and pedagogically liberating social construction necessary in an emerging democracy. [43] Scheffler (1967) argues that teachers should be regarded as free men and women with a special dedication to the values of the intellect and the enhancement of the critical powers of the young. This position is also compatible with the neo-Aristotelian viewpoint of Buchmann (1989) or Walsh (1993), who are concerned with the intrinsic worth of thoughts and experiences and 'love of the world'. [44]

It would be unhelpful to strive, officiously or prematurely, to press all teachers to undertake large-scale, personal programmes of philosophical study and reflection. For some the reservations of Rorty, Arendt or others might prove true and the capacity for both thought and action might be diminished. For others, it would represent a diversion from their subject specialist, pastoral and management responsibilities. Nevertheless, the need for reflectiveness over the philosophical assumptions within one's embedded daily practice as a teacher has emerged clearly in the present study. As Montefiore (1998: 289) argues, teachers as well as intellectuals bear a special

responsibility for 'truth and validity'; and many teachers will be intellectuals 'even if the two classes are not co-extensive, neither being wholly included in the other.'

What is being asked for involves a notion of the educated person, and the teacher as intellectual, in accord with that set out in Dewey's (1916) *Testament on Education and Democracy*. Teachers as philosophical intellectuals will want to give their pupils the opportunity to acquire that special form of shared assent, rationality and philosophical understanding that proper attention to the *pre-philosophical curriculum*, taken together with *philosophy teaching* itself, can engender. This will involve Aristotelian, hermeneutic, and existential perspectives, featuring an emphasis upon 'thoughtfulness' and action in both the intellectual and bodily domains. It will require the teacher flourishing philosophically at all the levels identified by Zeichner, including taking on the role of *public intellectual*. As Bottery and Wright (1996), Boyles (1992) and Giroux (1994) argue from different international contexts, 'mere professionalism will not suffice' which is only focused on professional or technical rationality. Thornbury (1995a & Appendix 37) provides instruments for teachers wishing to assess the extent of their stance as professional and public intellectuals.

13. The individual teacher's approach to possibility

The teacher also needs to engage as an intellectual in public life in promoting a canonical vision of what is possible (Berube and Cary 1995, Kelly 1995, Thornbury 1995a). Chapters 4 , 5 and 6 have argued for an approach to pedagogy and subject knowledge based on *possibilist* thinking which is rigorous and well-worked out in terms of a canon for each subject, and for each of the major dimensions of philosophy of ethics, aesthetics, epistemology metaphysics.

Success in teaching will be dependent on the professional skill and artistry in pedagogic technique. The best teaching will feature ready-witted, controlled extemporisation using the strategies identified by Leinhardt (1993). Leinhardt demonstrates that teachers have rigorous professional and academic criteria for establishing conceptual possibility. For example, skilful history teaching exhibits continuous dialogic and narrative activity similar to *ikat*, a subtle method of weaving. Teachers make indirect or passing reference to a concept or idea that is later extended

and used in an elaborated way. Early threads of an explanation, so diffuse, tentative and ostensively defined that the first time they are mentioned they could go unnoticed, are woven by the skilled teacher into a carefully designed and thoughtful progression.

This conceptualisation of what occurs in creative teaching is consonant with other pictures such as Driver's (1988) 'alternative, constructivist frameworks', or Newmann's (1990) 'classroom-thoughtfulness'. [45] It shows how the hermeneutic quest, a dialogue with both oneself and one's pupils, can be combined in the 'teaching connection' (Greene 1991b). [46] The notion of a dialectic with a constantly changing language and tradition and a commitment to a central metaphysic of possibility, operating within the vehicle of a canonical curriculum, accords with other perspectives. These can be combined to include the hermeneutics of Gadamer (1965), the narrative continuities of tradition (MacIntyre 1984) and self (Schechtman 1997), and the notion of 'dialogic rationality' (Myerson 1994).

Clearly, the paths of teaching creatively and possibilistically are diverse. They will vary over time, and between subjects, and to a large extent they will be worked out by the individual teacher. Heroic notions of individual virtuosity and creativity in teaching are neither appropriate or widely shared (Fryer and Collings 1991, Appendix 20). But innovation can be asked for. Kincheloe and Sternberg (1993), for example, wish to see a new kind of post-formal thinking and 'teacher disposition' which brings possibilistic playfulness and ironism into its repertoire. Each of Gallagher's (1992) hermeneutic modes, and each of Walsh's (1993) discourse modes, including the utopian, can be found a place in the possibilist canon.

Finally, our transcendencies are our possibilities in a phrase of Sartre's. Teachers engage with facticity-transcendence in regard to the growing person; and students should always be pursuing a synthesis of facticity and transcendence through the philosophy and pre-philosophical curriculum. [47] Teachers acting as *transformative, philosophical, public intellectuals* in the philosophical education of the young can provide leadership in the educational pursuit of possible worlds.

Notes to chapter 8

1 For instance by looking at the claims and counter-claims for teaching *philosophy and a pre-philosophical curriculum*, which were set out in chapter 2.

2 Newmann (1990: 52) argues that teachers, if they are to help students succeed with higher order challenges, must themselves model classroom thoughtfulness as they teach (see also Appendices 10 and 11). See Aronowitz and Giroux (1991: 87-88) for a discussion of the notion of 'the public intellectual', and the authors' notion of 'border-pedagogy' based on 'difference', 'counter-memory' and 'remembrance'.

3 Wollheim (1984) in discussing 'living as a person', questions those philosophers like Williams (1973, 1981) or Parfit (1988), who are more interested in questions of personal discontinuity than continuity. However, the arguments of Parfit (1988) and others concerning discontinuities in personal identity can be constructively drawn on, for instance when prudential morality is being considered. See also Taylor (1989) in *Sources of the Self*.

4 'A person lives his life at a cross-roads; at the point where a past that has affected him and a future that lies open meet in the present...To see why the posture of hanging between the past and the future is so special for a person, we have to introduce another interaction: that between a person's occurrent transient mental states and his underlying persistent mental dispositions..beliefs, desires, emotions, fantasies' (Wollheim 1984: 31). Wollheim (1984) distinguishes between mental states, mental dispositions and mental activities and also emphasises the dual role of methods of *introspection* and *interpretation* in dealing with 'living as' and 'becoming a person' (30, 33 and 167). Goodson's (1992, Appendix 3) schema asserts that teachers should come late to their philosophical position as educationists. However, as argued in chapter 3, they will have such a professional position whether they are aware of it or not, from their initial teacher education onwards (McCann and Yaxley 1992).

5 This point was argued in detail in chapters 2, 3 and 5.

6 An accessible account of this response should be presented in the school's *Prospectus* and in its *Institutional Development Plan* (see again chapter 7).

7 They complain about contemporary trends and that little in the education of the teaching profession seems to transcend technical rationality, and deal with issues of a cultural, social, philosophical, political or value base (96).

8 For example, the contribution that historical studies could make in defining the criteria for teaching counter-factually was demonstrated in chapter 4. Another example would be the approach to science teaching, where work on inductive thinking is claimed to transfer by means of *cognitive acceleration* to achievement in other subject areas (Adey 1991, 1994, Shayer 1991).

9 It is in this connection that the thinking taxonomies, content analysis and other instruments take on a particular importance in the *pre-philosophical curriculum*. In general, philosophy as a separate subject will not easily win a place in the formally timetabled curriculum. Therefore most teachers and lecturers will find themselves teaching the subject within their specialist subject time. It is difficult, however, to see how the appropriate rigour and specialist skill with which the subject requires to be taught can be provided without considerable INSET and other support. A whole school policy will need to address this question along the lines suggested in chapter 7. The relevance of subject taxonomies such as that, for instance, offered by Berrill

(1990, see Appendix 8) for exposition and argument, or by Shemilt (1984) for empathy (Appendix 21), to other subject areas also requires research.

10 The universalist, 'natural interest' claim made by Lipman was partly based on the ideal that because philosophising is oral, all can have access from an early age (chapter 2).

11 In terms of the transcendental argument this is a supererogatory question, since a great many philosophical issues are de facto being taught. The question here is about the way in which we deal with technical philosophical matters explicitly rather than implicitly.

12 The IAPC philosophical text *Lisa*, taught to secondary school students, deals with the dilemma arising when a boy who pays for a girl's cinema visit expects romantic favours in return (Lipman 1976, Lipman, Sharp and Oscanyan 1997). The issue is discussed by pupils in terms of whether they would apply a general rule or whether they would judge each occasion separately. During a lengthy discussion (in a lesson I observed), the IAPC teacher (who was herself a trained philosopher) could have intervened to introduce, and teach the technical philosophical distinction between *act* and *rule* utilitarianism, but chose not to do so. It could be argued that the students were philosophising in 'ordinary language' like philosophers, and that they had improved their philosophical understanding of a key distinction in moral philosophy without needing to use the technical language. But were these students trying to get to grips with a difficult concept with insufficient teaching?

13 Cam (1994a: 7) claims in his *Thinking Stories* to target analogical reasoning, conceptual (*sic*) analysis and other 'readily identifiable processes'. Yet only a philosophically literate person would readily identify 'What Would it Be Like to Be a Bat' as a much-debated 'thought experiment' originated by Nagel, or 'The Brain in a Vat' as a problem set by Putnam. Further more the stance here, as with the IAPC approach which Cam broadly follows, is anti-hermeneutical, ahistorical and heavily influenced by the ideology of a particular philosophical tradition. One cannot really claim, that such a stance is 'ideologically rational' in Siegel's sense (see chapter 3).

14 The individual teacher will need to use technical philosophical analysis as a pedagogic as well as philosophical tool. This would be similar to the primary teacher who consciously draws on Piagetian theory when teaching young children, but never discusses such theory with them.

15 For instance, if the claim made by Bhaskar (1986) following Kant is accepted, (chapter 3) one's position must be one of epistemological, encompassing moral relativism. For if there is no noumenal, final epistemological truth to be attained, it follows that no form of absolutism is tenable. If, on the other hand, the more Hegelian position is taken up that the noumenal is some kind of final truth which can be reached through the layers of transcendental investigation, moral absolutism could be a consistent outcome.

16 Children do need appropriate epistemological security at different points of their personal and philosophical growth development. Teaching 'definite facts' will need to be supplemented by questioning of the child's intellectual position, and the need to move them on, in Vygotskian terminology, to the next *zone of proximal development.*

17 Piaget's early work on the moral world of the child, and cheating in marbles, suggested that this might be a necessary development stage in beginning to develop moral autonomy. Recent research (Gold 1993: 49) suggests that those, particularly autistic children who do not pass through this phase at about four years of age will fail to develop a 'theory of mind', the conscious knowledge that other people have internalised thoughts which are perhaps different from one's own.

18 Mill's depression was partly concerned with the problem that we are not able to throw off, in Merleau Ponty's phrase, 'our historically-conditioned self'.

19 Early fears that the sixth form study of philosophy might trigger a rise in adolescent mental breakdown appear unfounded. On the other hand, adolescent depression in my experience is unquestionably associated with thoughts and feelings of de-personalisation, which correspond close to philosophical concepts such as solipsism or Sartrean 'angst', as chapter 5 demonstrated in relation to philosophical, psychiatric and clinical literature.

20 As discussed in chapter 1, the medical and psychiatric literature has given little attention to the depressive effects of study other than from work-load stress. Psychiatric clinicians (Hodgman and McAnarney 1992, Stanley et al 1992) complain that depression and suicidality remain 'widely undiagnosed and untreated' in the adolescent population.

21 'My father, to whom it would have been natural to me to have recourse in any practical difficulties, was the last person to whom, in such a case as this, I looked for help. Everything convinced me that he had no knowledge of any such mental state as I was suffering from, and that even if he could be made to understand it, he was not the physician who could cure it. My education, which was wholly his work, had been conducted without any regard to the possibility of its ending in this result; and I saw no use in giving him the pain of thinking that his plans had failed, when the failure was probably irremediable, and, at all events, beyond the powers of *his* remedies' (Mill: 108).

22 At least one philosopher takes a pyscho-analytical perspective; see Wollheim (1980: 318).

23 Academic impairment only becomes evident at severe levels of depression and so Mill's ability to function cognitively would have remained intact (Heiligenstein et al 1996). Some clinical literature finds a correlation between two factors, of 'focusing attention inwardly on the self' and current symptoms of depression and anxiety (Oliver et al 1995). Other studies have found that a *cognitive triad* of views of self, world and future are associated with the degree of severity of childhood depression (Stark et al 1996).

24 Another child explained to Radford that cows were timid because they had 'magnifying eyes'. 'As I hurried home, sneering at distant cows, pondering what Cecil had said, I suddenly felt - dizzy. There was something wrong, something terribly, profoundly, wrong, with what Cecil had said. This was the first occasion that I can recall on which I was struck, seized almost literally, by a philosophical problem' (Radford 1996: 4-5).

25 Winter (1992: 109) shows how the core professional values of social work graduates, exhibited in the form of explicit argument in their examined, written work, can be assessed as dispositions.

26 See again chapter 5.

27 For example, Ball's (1985) 'curriculum baron', the territorial claimant who wishes to take over whole school responsibility for the teaching of thinking skills. *Mauvaise foi* is used here in Sartre's sense (see Catalano 1985).

28 One of the more visible by-products of an emphasis on facility in informal logic is the public debate, a popular genre in US schools and colleges.

29 Arendt (1978: 85). Witkin (1974) has similar doubts about transfer in the arts.

30 Rorty (1989: 73) claims concerning the ironist: '1. She has radical and continuing doubts about the final vocabulary she currently uses, because she has been impressed by other vocabularies, vocabularies taken as final by people or books she has encountered; 2. she realises that argument phrased in her present vocabulary can neither underwrite nor dissolve these doubts; 3. insofar as she philosophises about her situation, she does not think that her vocabulary is close to reality than others, that it is

in touch with a power not herself'. He adds: 'Ironism...results from the power of re-description. But most people do not want to be re-described. They want to be taken on their own terms - taken seriously, just as they are and just as they talk' (Rorty (1989: 89).

31 McNamara (1990: 147-60). See Hager and Kaye (1991) for an opposing view on transfer.

32 The importance of narrative was emphasised and the concept defined in chapter 3; and discussed in chapter 6 in relation to the canonical. See also Schechtman's (1996: 96) discussion of the topic.

33 The case made in chapter 4 is relevant here, that multiple intelligence, sensoriness, and identity may all be involved in possibilist thinking.

34 The importance of prior knowledge and experience, including the role of memory, may be crucial to such a project as Boud (1993: 33-9) shows. Experience must be remembered to be reflected upon in a manageable way as the sad history of Luria's (1987) mnemonist demonstrates.

35 Zeichner (1983) classifies classroom practice in four paradigms. The *behaviourist* views teaching in terms of a series of competences or technical skills that have to be practices and learned by the student teacher. The *personalistic* views teaching as a process of personal growth. The *traditional craft* views teaching as a body of craft knowledge and skill that is acquired only through apprenticeship. The *inquiry-oriented* views teaching in a wider social context of which the teacher must become aware in order to make appropriate judgements concerning values and actions. It is at the moral and ethical level that the arguments of moral philosophers, and philosophers of education, would come into play. Current examples worth scrutiny within the context of a taught Master's course could include: Haydon (1997), Kekes (1993), Rawls (1971), Raz (1986) or White (1990, 1996). See Appendix 31.

36 See again discussions of this matter in chapters 2, 3, 5 and 7.

37 'Philosophers from Parmenides to Nietzsche have used the genres associated with imaginative literature to articulate and support their theories. Similarly, 'literary' authors as diverse as Dante and D. H. Lawrence have sought to enact and render plausible philosophical theses in their imaginative works. There are many points of contact between such endeavours and the efforts of philosophical autobiographers. But in the latter case the generic requirement that a story be related to fact provides a check on the imaginative impulse' (Warner 1984: 207).

38 See Grumet (1989: 15). How the autobiographical narrative of philosophers has played an important role in the development, and even the actual format of their published work can be seen in the case of Kierkegaard and Wittgenstein.

39 For example, the core courses for the Boston University *Master's Degree in Creative and Critical Thinking* include: Critical Thinking, Creative Thinking, Foundations of Philosophical Thought, Advanced Cognitive Psychology, Practicum in Educational Intervention, and Educational Evaluation (Appendix 31).

40 This will also apply in a primary school fortunate enough to have a trained philosopher on its staff.

41 Said (1991, 1989) discusses the rise of the intellectual from the late 18th century to the present post-industrial period, an early precedent being the 'mastered irony of the intellectual's true situation' displayed by Swift. The noun *intellectuel* first came into currency in France in 1898 during the Dreyfus affair.

42 See Giroux (1988, 1989). Entwistle (1979) provides an interesting critique of Gramsci's 'conservative' philosophy.

43 'The challenge for the teacher-educator in these changing times in South Africa is to teach student teachers to become flexible, critical and tolerant enough in their

practices to provide the ground for action rather than acquiescence, to recognise that it is they who will regulate and instruct the actions of their pupils. Cultivating the disposition to think in South African children will require a vibrant pedagogic relation, one that works against that which presents itself as finished and authoritarian' (Flanagan 1993: 192).

44 See again chapter 2. However, not all teachers do, or want to function as intellectuals. Jonathan Ree (1992) has drawn attention to that tension which still impels philosophers to intervene in the world. Reviewing *Politics of Irony: Essays in Self-Betrayal* (Conway and Seery 1992), he observes : 'Despite that ironism, then, they are plagued by a sense of intellectual responsibility.'

45 It is an approach which has affinities in psychology with Herbartian 'apperception mass' (Gamo 1908) and with Gestalt theory; it is philosophically reminiscent of Wittgenstein's notion of the 'ostensive definition' of meaning.

46 This form of pedagogic extemporisation is similar to the account given of thinking in jazz given by Berliner (1995). See also Morton (1995) for a discussion of Berliner's theory. It also has relevance to the notion of memorised narrative as individual performance - not rote memory reproduced (Neisser 1987). It is also consonant with reader reception theory (Ryan 1991).

47 Catalano (1985: 82-4).

Over-view and prospects

A principal thesis of this study has been that a pre-philosophical curriculum and pedagogy exists transcendentally; and is de facto taught in all schools and colleges. Importance must be attached to teaching a *philosophy and pre-philosophical curriculum* because one is teaching it already (chapters 2 and 3).

Such a curriculum will emphasise both the education of the intellect, and feelings, dispositions, moral and intellectual virtues. It will pay considerable attention to speculative, conditional and *counter-factual* thought about possible worlds (chapters 4 and 5). A present lack of formal curriculum or philosophical guidance as to how teachers might proceed has been identified, together with the need for a coherent *canon* in pre-philosophy within the National Curriculum (chapter 6). The case for a formal institutional plan, providing *a philosophy and pre-philosophical curriculum in each school and college,* has therefore been put forward. The argument has also been advanced that teachers should act as 'reflective practitioners' in the development and review of such a curriculum; and, more generally in the society, as *transformative professional, philosophical and public intellectuals.*

A number of tasks and lines of development for the future teaching of the philosophy and the pre-philosophical curriculum can be identified. In particular, rigorous programmes of research and scholarship are needed.

> The field needs more self-criticism. It is a bit paradoxical that some developers of programmes to teach critical thinking have had less than severely critical attitudes toward their own work. (Nickerson 1988: 43) [1]

There is scope for a further study of the diversity of the field as it presents itself as philosophy of education, in the form of critical thinking, informal logic, philosophy in schools, transferable skills, problem-solving and intervention programmes.

Disparate strands in a pluralist *social movement*, of various schools of thought in philosophy teaching and the pre-philosophical curriculum, have been identified. Many of these could be brought together in a programme of philosophical and empirical sociological enquiry. [2] A fuller understanding of the social movement phenomenon would be particularly helpful in the management of public policy and educational funding. [3] Those concerned with public policy in relation to the curriculum, school effectiveness and improvement might look in particular at how whole school and college approaches to the philosophy and pre-philosophical curriculum can be put in place. Such an examination could include not only the National Curriculum, the years of statutory schooling, but also post-secondary and vocational education, and teacher education.

Within these approaches, there would be a particular need to look at the role of ethical education, where a number of important developments and trends have appeared. The debate about dispositions in this study has bearing on the anticipated provision in England and Wales of values education, based on a canon of public values as reflected in the *Report of the National Forum for Values in Education and Community* (1996). However, as was shown in chapter 5, the training of the dispositions and virtues is a more philosophically complex, and subtle matter than much of the educational and critical thinking literature presently recognises. There are a considerable number of pitfalls to be avoided or solved, as consultations carried out by the Qualifications and Curriculum Authority have confirmed (QCA 1998abcd).

Among the future philosophical tasks will be the need to clarify further those particular forms of thinking which are constitutively characteristic of individual subject specialisms and their discourse. In this connection there is scope for exploring the variety of conceptions of domains in philosophy and in other disciplines; as in the case of the aesthetic notion of 'art-worlds' (Wollheim 1980b), or the 'Daisyworld' model that has underpinned the significant reconciliation of evidence for a self-regulating earth with natural selection theory (Lenton 1998). [4]

The further development of existing, and the eliciting of new taxonomies for both subject specific and generalisable purposes is needed. [5] These would need to be examined for their epistemological, aesthetic, ethical and metaphysical assumptions; and from the point of view of their empirical effectiveness in the classroom. Regarding curriculum and pedagogy, there is need for philosophical work scrutinising phenomenographic and constructivist approaches (Baum 1977, Matthews 1994), and in developing general pedagogy in the 'weaving of instructional explanation' (Leinhardt 1993). [6] The proposals for an AS level syllabus in critical thinking within the framework of general studies work during the A level years also offer an opportunity for work on the philosophical curriculum.

Educationalists and philosophers should look more widely at developments in cognate areas; for instance, in psychology and in the neurology of the brain, where research and theory have begun to contribute to philosophical theory in illuminating the problems that teachers face in teaching thinking. [7] A number of these fields of enquiry, especially those connected with counter-factual thinking, personal identity, cross-domain intelligence and sensory transfer, have been explored in this study. [8] It would be important for educators to continue to monitor and gain benefit from these innovatory developments.

A special place has been argued for teachers' own philosophical perspectives on their lives, thinking and careers as they proceed. This should be explored further. There is considerable scope for further practitioner research and 'ownership' in the approach to pre-philosophical thinking. This can be based on the extensive, existing successful practice which this study has described - and upon its recommendations.

Teachers of philosophy in schools and colleges have particular contributions to make in their dual role as philosophers and educationists. They can do this by drawing extensively on mainstream philosophical concerns. They can explore collegially the subject territorialities of colleagues. They can act as consultants in devising and supporting whole school policies for *the philosophy and pre-philosophical curriculum.* Institutions of higher and teacher education have a particular responsibility in carrying forward innovation in research policy and development. They also can act as a resource and a partner in courses leading to the provision of philosophical and pre-philosophical curricula. Teachers, lecturers, and especially

philosophers in schools, colleges and higher education share important collective responsibilities as *professional, public intellectuals* as argued in chapter 8.

It has been urged that schools and colleges should teach their own canonical and 'strong' version of the *philosophy and pre-philosophy curriculum.* In doing so they will certainly find some place for the subsidiary, Austinian role of philosophy, of helping students to think clearly and critically. But philosophy teachers in schools and colleges, and those advising them, should not be diverted from philosophy's main purpose; which is to provide the prior, unifying discipline upon which all others rest. The marginalisation and trivialisation of the main philosophical tradition must be resisted.

Finally, there is an especially strong case for encouraging more conjectural, possibilist and metaphysical speculation in the curricula of schools and colleges. Developments in counter-factual and possibilist thinking need to be given serious attention by subject teachers and within whole school or college policies. The extension of ethical, aesthetic and metaphysical vision is the most challenging task in this connection; and it can be best achieved by using the ontological pedagogy of possibilism, the philosophy of 'if', described by (Edgington 1995) as having such great significance:

> The study of conditionals raises hard questions - about truth, objectivity, propositions. Who would have thought that one little word could disturb so much. (323) [9]

Notes to chapter 9

1 See also the review of issues and trends in evaluation by Maclure and Davies (1991: 215-226) in *Learning to Think: Thinking to Learn.*

2 Two examples would be the hermeneutic notion of empathy and the application of possible and plausible worlds theory to fields other than history teaching and scholarship. Work on memory and previous knowledge in relation to the teaching of

philosophy and higher order thinking, seems to have been relatively neglected (Alexander et al 1994, Fincher-Kiefer 1992).

3 See again chapter 1 and Giddens (1993: 642-7).

4 This task is especially relevant to cross-curriculum and cross-domain thinking, ranging from the detailed treatment of the geography curriculum (as mentioned in chapter 4), to problems such as trans-world depravity in religious and ethical education as raised by philosophical theologians (Plantinga 1974), and transcendental aspects, such as the philosophical 'underworld' or domain identified by (Honderich 1995: 678). The review by Lenton (1998) in *Nature* of the evidence for a self-regulating earth, focusing on feed-back mechanisms that might generate such self-regulation - and thus the reconciliation of natural selection with Gaia - is an impressive, current example of domain theory. Kim (1998) sees the problem of *reductionism* in philosophy as being essentially concerned with domains. Equal fertile ground is offered by *decision game theory* (Bicchieri 1998) and through exploration of the notion of the *thought experiment.* Commentators such as Gooding (1998) Kuhn (1977) and Sorensen (1992) have pointed out that thought experiments, such as Searle's Chinese Room or the Turing Test, can be seen as narrative simulated worlds, mental models of domains which are initially non-propositional: 'logic is only used afterwards to validate conclusions reached by thinking with models' (Gooding 1998: 396)

5 The Newmann, Barrett, Ennis and Berrill models (Appendices 11,12,7 & 8) provide examples of starting-points. Burden and Williams (1998) make a useful contribution in their dual stress on general cognitive strategies and skills and those which are specific to subjects within the National Curriculum.

6 Leinhardt's (1993: 46-74) empirical findings were discussed in Chapter 8. More generally, 'pedagogy remains a seriously under-researched topic' in relation to both the National Curriculum and life-long learning (QCA 1998b: 9). In the matter of classroom processes, for example, we are told that 'teachers have difficulty in implementing problem-solving, enquiry and investigative aspects of the curriculum' (12).

7 I have in mind, particularly, the work of Lewis and Hawthorn on plausible worlds (chapter 4), that of Bhaskar on the philosophy of science (chapter 3), and Nussbaum (chapter 5) in literary theory and philosophical aesthetics.

8 Here the importance of previous knowledge and memory should be stressed. Key research questions such as whether 'natural' or 'strategic' memory operates more strongly, in memory champions for example, remain unresolved (Wilding and Valentine 1994).

9 Edgington (1997) emphasises the pedagogic importance of conditional thinking as a heuristic device. Beyond the field of technical philosophy, some Masters Courses address such a need. Liverpool University teaches an MA in Science Fiction Studies in which philosophical topics are studied (*Times Educational Supplement*, April 29th, 1994). Leeds Metropolitan University offers a Masters in Future Studies, 'the first of its kind in Europe' (*Independent*, July 7th 1995). Interest among philosophers in counter-factual and conditional philosophy continues, the present 'state of the art' being comprehensively reviewed by Edgington (1995) and Divers (1997).

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Appendices

1. Philosophically related questions of principle concerning the approach to a philosophy and pre-philosophical curriculum: Thornbury (1996).
2. Ideological Contexts of Curriculum Planning: Morrison and Ridley (1989).
3. Possible Worlds: working examples: Bradley and Swartz (1979).
4. Seven characteristics of children's use of language: Tough (1976).
5. Levels of biography of teachers: Goodson (1992).
6. Five strategies for teaching thinking as a cross-curricular theme: after National Curriculum Council (1990).
7. A characterisation of the ideal critical thinker: Ennis (1991).
8. A multi-dimensional model of the development of written argument: Berrill (1990).
9. The Barrett taxonomy: cognitive and affective dimensions of reading comprehension: Barrett (1972).
10. Proposed indicators of classroom thoughtfulness: Newmann (1990).
11. A suggested approach for the subject teacher: Newmann (1990).
12. The Lipman teaching approach to questioning: Lipman (1980).
13. Six characteristics of constructivism: Driver (1988).
14. Assessment Domains: The Cambridge History Project (1992).
15. Six defining characteristics of the discourse community: Swales (1990).
16. Five theses concerning narrative: Fox (1989).
17. Content analysis of the Schools Curriculum and Assessment Authority *Draft Proposals for the Review of the National Curriculum* : Thornbury (1995).
18. Measuring and Recording Critical Thinking Skills and Sub-skills & Critical Thinking Dispositions: Facione and Facione (1992).
19. Holistic Critical Thinking Scoring Rubric: Facione and Facione (1994).
20. Teachers' views about creativity: Fryer and Collings (1991)

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21. Hierarchically ordered objectives for teaching and assessing empathetic construction: Shemilt (1984).

22. Issues arising within a whole school or college: The Sir Rene Descartes Comprehensive School Case Study: Thornbury (1994).

23. Some Theoretical Concepts in Research on Teacher Training: Pope (1993).

24. Key questions for a staff to ask themselves in planning a philosophy and pre-philosophical curriculum: Thornbury (1995)

25. Professional Values in the ASSET Programme: Core Assessment Criteria: Winter (1992).

26. Genre and accessibility relations: Ryan (1991).

27. A typology of mimetic discourse: Ryan (1991).

28. Relevant types of accessibility relations from AW (Actual World) involved in the construction of a TAW (Textual Actual World): Ryan (1991).

29. Encompassing definitions for the thinking processes relevant to different domains or disciplines: Donald (1992).

30. Interview on Conditionals, Counter-Factuals and Possible Worlds with Professor Dorothy Edgington, University College, Oxford: Thornbury (1997)

31. An Example of a Graduate Programme Program in Critical and Creative Thinking: University of Massachusetts at Boston (1994).

32. The three features: literary, narrative and fiction: Ryan (1991).

33. National Forum for Values in Education and Community - Consultation Paper: School Curriculum and Assessment Authority (1996).

34. Four types of hermeneutic thinking relevant to classroom practice: Thornbury (after Gallagher: 1992).

35. The Five Standards of Authentic Instruction: Newmann and Wehlage (1993).

36. A Goods-Services Continuum: Shostack (1977)

37. Teachers as intellectuals: an assessment instrument (Thornbury 1993)

38. The Road Not Taken, by Robert Frost: A 'metaphysical' poem seen in terms of possible worlds theory: Thornbury (1997).

Appendix 1

Philosophically related questions of principle concerning the approach to a philosophy and pre-philosophical curriculum: Thornbury (1996).

The following range of questions can be asked at various stages, including those of review and reflection, of teachers or lecturers taking a course at Master's level which looks at what is involved in teaching philosophy and a pre-philosophical curriculum.

1. Does philosophy enjoy primacy as the pre-eminent and unifying form of meta-cognitive discourse which is de facto taught, and should be taught in schools and colleges?

2. Is not pre-philosophical preparation for its study, in the form of *a pre-philosophical curriculum*, both worthwhile and justifiable?

3. To what extent can the teaching of philosophy and a pre-philosophical curriculum be seen as a method of bringing about various forms of empowerment and hegemony?

4. Should the broad democratic claim be accepted, that the study of philosophy can contribute to the flourishing of a democratic society?

5. Has philosophy and the pre-philosophical curriculum been sometimes used for the training and formation of anti-democratic élites?

6. What is the scope for the abuse of the teaching of philosophy and the pre-philosophical curriculum in terms of indoctrination?

7. Can the fact that children display wonder and the pre-philosophical beginnings of metaphysical awe be characterised as philosophical behaviour?

8. Can the natural curiosity that children show in philosophical matters be described justifiably as 'philosophical'?

9. Can the contemplation of ineffable or intractable problems provide children with a pre-philosophical foundation for the beginnings of metaphysical thinking?

10. Should the essentialist claim that children have a natural affinity for, enjoyment of, and interest in philosophical questions, be accepted as evidence that they are philosophising in the formal sense?

11. Is the transcendental argument persuasive, that philosophical thinking lies behind the appearance of things?

12. Would such acceptance entail acceptance of the further proposition that, at any given time, the philosophical thinking which lies transcendentally behind our teaching amounts to our, in effect, delivering a curriculum canon?

13. Should counter-factual and possibilist thinking be taught, on the grounds that it can make a particular and distinctive contribution to the teaching of formal philosophy and also a pre-philosophical curriculum?

14. Is a consequence of teaching philosophy, or a pre-philosophical curriculum, that students acquire 'transferable' metacognitive skills of thinking and philosophising?

15. How can a canon for teaching such meta-competences be identified?

16. How can they be more successfully taught than at present?

17. What kinds of philosophical thinking are not generalisable in the sense of being separable from their originating forms of discourse or subject disciplines?

18. Does most philosophical thinking first occur pre-philosophically within an originating and specialist form of discourse or knowledge?

19. Is the linguistic clarification of problems a main, or a subsidiary role of the philosophical and the pre-philosophical 'thinking curriculum'?

20. Do some subject disciplines have a larger and justifiable claim than others that they should to teach the pre-philosophical curriculum?

21. To what extent could the teaching of philosophy and a pre-philosophical curriculum be claimed to bring cognitive and affective benefits related to the formation of dispositions and virtues?

22. Should the potential of philosophical thinking for causing depression be conceded?

23. Is some philosophical account of the relationship between thought and feeling necessary for any full pedagogic or curricular theory of the place of philosophy or pre-philosophical teaching.

24. Does flourishing as a person, and one's personal autonomy, depend on access to a philosophical and a pre-philosophical curriculum?

25. Is this also desirable for the teacher, including in his or her role as a public intellectual?

26. How can a school or college develop its own policy in response to such questions?

27. What is the best approach to planning and implementing a philosophy and a pre-philosophical curriculum in an individual school or college?

28. What are the implications for the individual teacher or lecturer?

29. Is there any basis for a rights claim to be mounted, according to which the students are entitled to be taught, and the teachers obliged to teach a philosophy and the pre-philosophical curriculum?

30. What are the implications in terms of pedagogic and professional ethics?

31. What kind of support could higher education, and the philosophy of education as a discipline, offer this process?

32. How do we know when we have taught philosophy and the pre-philosophical curriculum well; what kind of person will the philosophically educated student be?

33. What are the implications for educational policy school improvement and effectiveness?

34. What should be the focus of future work in this area, in research, curriculum development, philosophical investigation and public education policy?

Source: Chapter 1, *The Teaching of Philosophy and the Pre-Philosophical Curriculum in Schools and Colleges*: (Thornbury 1997).

Appendix 2

Ideological Contexts of Curriculum Planning: Morrison and Ridley (1989) and Skilbeck (1976)

ideology	progressivism child-centredness romanticism	classical humanism traditionalism academicism conservatism	liberal humanism	instrumen talism, revisionism economic renewal	reconstructionis m democratic socialism
emphasis	individual child	knowledge - unequal access	knowledge - equal access	society - status quo	society - changed
theory of knowledge	empiricist, active, evolutionary, subjective, emphasis on processes, integrated curricula	disciplines, non-vocational, academic, high culture, emphasis on products, rationalistic	common culture curriculum	utilitarian, economically, relevant, vocational, scientific, technological	revolutionary, problem-solving, active, socially relevant, vocational
theory of learning and of the learner's role	experiential, spontaneity, emphasis on skills and processes, co-operative, intrinsic motivation	obedience, passivity, conformity, uniformity	induction into key areas of experience, active and co-operative learning	induction into vocationally relevant areas	apprentice-ship, practical, co-operative, problem- solving
theory of teaching and of the teacher's role	guide, provider of multiples resources, facilitator, catalyst of child's self-chosen curriculum	instructor, information transmitter, authoritative, formal tutor	guide, provider of resources, facilitator	instructor, trainer, transmitter of vocationally relevant experiences	guide, catalyst of social changes, disseminator of centralist philosophy, instructor, trainer
theory of resources	first-hand, diverse, extensive	second-hand, restricted	first - and second-hand, multiple, extensive	narrowly relevant to content, practical, vocational	individual and group work as relevant to task
theory of organisation of learning situations	diverse, flexible, informal, co-operative, group work, discovery methods	class teaching, formal, uniform, competitive	open, flexible, diverse	narrow, practical, relevant to task, class and individual teaching, uniformity	individual and group work as relevant to task
theory of assessment	diagnostic, multiple criteria, informal, profiling	written, formal, attainment testing, examinations	diagnostic, norm and written, formal or informal	formal, written and oral, practical	flexible, formal or written as appropriate, attainment testing
theory of aims, objectives and outcomes	self-expression, individuality, creativity, development of whole personality	received curricula, elitist, non-vocational, high culture	equal access to key areas of knowledge, egalitarian	extrinsic worthwhile-ness, relevant to economic good, efficient worker	extrinsic worthwhile-ness, relevant to social good, citizenship, common good

Source: Morrison, Keith, and Ken Ridley. 1989. Ideological contexts of curriculum planning. In *Approaches to Curriculum Management*, ed. M. Preedy, 46-7. Milton Keynes: Open University Press.

Appendix 3

Possible Worlds: working examples: Bradley and Swartz (1979)

In *Possible Worlds*, Bradley and Swartz(1979) provide narrative examples to support their claim that counter-factuals can help in the solution of philosophical problems (13).

Example 1

They offer, for instance, a possible worlds parable to respond to the thesis that persons who lack a language cannot have reflective beliefs (122-5). In it they posit a creature, Arthur, who never comes across any other animate creature and, not surprisingly, never learns a language; but whose central nervous system, upon post-mortem, is revealed as highly developed, and whose behaviours and problem solving with a bellows, forge and malleable metal shows a very high level of inference drawing.

Example 2

A second example concerns the thesis that persons (creatures) who lack a language cannot believe necessary truths - an attempt to question the No-Belief-In-Necessity-Without-Language-Theory (125-6).

In this story it is postulated that neurophysiologists have located the specific locus within the brain of neurones for particular beliefs. A child, Henry, is raised in a laboratory with a plethora of development activities - except language. His highly localised neurones are excited in the same way, especially in relation to particular inferences, as with language possessors and so it is concluded that belief in necessity can occur without language.

Example 3

A third example attempts to refute the thesis that knowledge is 'justified true belief'.

We are asked to imagine a possible world in which a secretary has relied for years on the electric clock hanging on his office wall. For all the forty years he has worked in that office, the clock has never once been wrong. One morning a client works in the door below the clock. Since her back is to the clock she doesn't see, and wishing to know what times it is, she asks the secretary. He glances at the clock for the first time that day, reads it correctly, and reports 'It is ten minutes past nine'. Now as it happens, unknown to him, the hitherto trusty clock expired exactly twelve hours earlier. He happened to glance at it at just the one moment during the morning when its unmoving hands were pointing at the right time.

Bradley and Swartz comment:

> Three conditions are satisfied: (1) the propositions that the time is ten minutes past nine, is true; (2) he believes that proposition to be true; and (3) he is justified in believing that proposition to be true - after all, the clock has been unerringly reliable for forty years. But does he *know* that it is ten minutes past nine? We would hardly want to say so. Rather we would say that his was a merely fortuitous belief, and this for the reason that one cannot what time it is by reading a stopped clock (126-7).
>
> The thesis which we are challenging may be stated, equivalently, in this fashion: A person's justifiably believing a true proposition P implies that person's knowing P. This thesis, of course, is readily paraphrased into a possible-worlds idiom, *viz.*, "Any possible world in which both P is true and a person, *a*, justifiably believes that P is also a world in which *a knows* that P." Given this latter paraphrase, the strategy of attack becomes clear: we must try to describe a possible world in which (1) a person justifiably believes a true proposition, and (2) that person does now know that the proposition is true. Can we tell such a parable? Although examples eluded philosophers for centuries, it is now a trivial matter for tyros in philosophy to construct them with ease.
>
> In sum, then, we have our counter-example. There is a possible world in which a person justifiably believes a proposition which is true and yet does not know it. From a proposition's being true and being justifiably believed, *it does not follow* that proposition is known to be true. Knowledge, in short, requires something more than mere justified true belief (126-7).

Source: Bradley, Raymond and Norman Swartz. 1979. *Possible Worlds: An introduction to Logic and its Philosophy*. Oxford: Basil Blackwell.

Appendix 4

Seven characteristics of children's use of language: Tough (1987)

1. *Self-maintaining*

   - referring to the needs and wants of the self or group, the use of language as a competitive and critical instrument

2. *Directing*

   - to guide and control one's own and others actions, to instruct, demonstrate or demand

3. *Reporting*

   - commenting on past or present experiences

4. *Reasoning*

   - explaining events and actions, recognising problems and justifying solutions, not just using words as labels

5. *Predicting*

   - using past experience to anticipate and predict the future

6. *Projecting*

   - imagining ourselves in other situations, with other experiences; or empathising with the feelings and reactions of others.

7. *Imagining*

   - inventing stories or imaginary situations.

Source: Tough, Jean. 1976. *Talk for Teaching and Learning*. London: Ward Lock. Quoted in Robert Fisher, ed. 1987. *Problem-Solving in Primary Schools*. Oxford: Basil Blackwell: 35.

Appendix 5 (i)

Levels of biography of teachers: Goodson (1992)

Goodson's argument

From teachers' own accounts, but also from more detached research studies, it is clear that the teachers' previous *life experience and background* help shape their view of teaching and essential element in their practice.

The teacher's *life style* both in and outside school and his/her latent identities and cultures impact on views of teaching and practice.

The teacher's *life cycle* is also an important aspect of professional life and development. This is an unique feature of teaching. For the teacher essentially confronts 'ageless' cohorts; this intensifies the importance of the life cycle for perceptions and practice.

The teacher's *career stages* are important research foci, for the researcher codes the subjects' words according to certain phases or periods in his or her life; what many qualitative researchers call a previous career.

Beyond major career stages there are *critical incidents* in teachers' lives and specifically their work which may crucially affect their perceptions and practice.

> Studies of teachers' lives might allow us to 'see the individual in relation to the history of his time... The initial focus on the teachers' lives would therefore reconceptualise our studies of schooling and curriculum in quite basic ways.' (Goodson 1992: 243-4)

Appendix 5 (ii)

Developing teacher role identity: a model linking stages of development of teacher role identity with phases of the Biographical Transformation Model

Stages of development of teacher role identity	*Phases of the Biographical Transformation Model*
Family experiences as a child Experiences with teachers School experiences	Formative experiences
Meaning of family experiences Meaning of experiences with teachers Meaning of school experiences	Interpretation
Family role models Negative teacher role models and Positive teacher role models Development of educational philosophy	Schema
Ideals of adult-child relationships Ideal instructional strategies Ideal instructional environment	Framework for action
Significant recent experiences and people	
Teacher role identity	Teacher role identity

Source: Goodson, Ivor ed. 1992. *Studying Teachers' Lives*. London: Routledge.

Appendix 6

Five strategies for teaching thinking as a cross-curricular theme: after National Curriculum Council (1990)

1. Teach the themes by continuous infusion through the National Curriculum and other subjects.

2. Have whole curriculum planning leading to *blocks of activity*: a series of subject-based topics lasting in which the themes are embedded, or featuring themes.

3. Have separately timetabled work on critical, creative and pre-philosophical thinking *within subject timetables.*

4. Have critical, creative and pre-philosophical thinking taught within a *separately timetabled programme,* e.g. in PSE.

5. Have *long block* timetabling, e.g discussion weeks on major and controversial issues.

Source: National Curriculum Council. 1989. *Curriculum Guidance No 6: Economic Awareness.* London: HMSO.

Appendix 7

A characterisation of the ideal critical thinker: Ennis (1991)

Working definition

'Critical thinking' means reasonable reflective thinking that is focused on deciding what to believe or do.

Given this definition, the idea critical thinker can be roughly characterised by the following interdependent and somewhat overlapping set of twelve dispositions and sixteen abilities.

All twelve dispositions and the first twelve abilities are offered as constitutive of the ideal critical thinker. The last four abilities (here called auxiliary abilities) are helpful and generally needed by the idea critical thinker.

Dispositions of the Ideal Critical Thinker

To be clear about the intended meaning of what is said, written or otherwise communicated

to determine and maintain focus on the conclusion or question

to take into account the total situation

to seek and offer reasons

to try to be well informed

to look for alternatives

to seek as much precision as the situation requires

to try to be reflectively aware of one's own basic beliefs

to be open-minded; consider seriously other points of view than one's own

to withhold judgement when the evidence and reasons are insufficient

to take a position (and change a position) when the evidence and reasons are sufficient to do so

to use one's critical thinking abilities

Abilities of the Ideal Critical Thinker

(The first five items involve *clarification*)

to identify the focus; the issue, question, or conclusion

to analyse arguments

to ask and answer questions of clarification and/or challenge

to define terms, judge definitions, and deal with equivocation

to identify unstated assumptions

(The next two involve the *basis* for the decision)

to judge the credibility of a source

to observe, and judge observation reports

(The next three involve *inference*)

to deduce, and judge deductions

to induce, and judge inductions
to make generalisations
to make explanatory conclusions (including hypotheses)

to make and judge value judgements

(The next two are *metacognitive* abilities - involving *supposition* and *integration*)

to consider and reason from premises, reasons, assumptions, positions, and other propositions with which one disagrees or about which one is in doubt - without letting the disagreement or doubt interfere with one's thinking (suppositional thinking)

to integrate the other abilities and dispositions in making and defending a decision

to proceed in an orderly manner appropriate to the situation, for example:

to follow problem solving steps
to monitor one's own thinking
to employ a reasonable critical thinking checklist

to be sensitive to the feelings, level of knowledge, and degree of sophistication of others

to employ appropriate rhetorical strategies in discussion and presentation (orally and in writing)

to employ and react to *fallacy* labels in an appropriate manner.

Source: Ennis, R. H. 1991. Critical Thinking: A Stream-lined Conception. *Teaching Philosophy*, Vol 14, no. 1: 8-9.

Appendix 8

A multi-dimensional model of the development of written argument: Berrill (1990)

I. Thesis development

No Thesis: Empty assertions; unconnected opinions without developed support

Loose Focus: Ideas are still essentially independent. There is a general sense that all ideas relate to a topic but most often ideas are linked only to a single other idea in the paper. There is no central thesis.

Emerging Thesis: There is an attempt to prove a thesis and an accompanying attempt to define and support ideas presented. The relationship between ideas is apparent, although sometimes implicitly, but the nature of that relationship varies. Items are not parallel in type or in value. Inconsistent.

Restricted Thesis: Explicit statement of thesis which may or may not be an answer to a question at issue. Ideas are adequately defined and supported. The relationship between ideas is apparent with an attempt to maintain consistency in type or value or evidence. There is no attempt to speculate or to apply the thesis to other situations.

Elaborated Thesis; The thesis is a probable answer to a question at issue: this answer largely determines the selection of evidence (content considerations) as well as the structure of the piece as a whole (rhetorical considerations). There may be an attempt to apply the thesis to other situations.

Hypothesising Thesis: The whole piece is logically linked as for 'Elaborated thesis' but now also includes speculation and/or application to other situations as an integral part of the argument.

II Idea Development:

Cognitive level of idea chunks or of evidence within the paper (after Wilkinson et al 1980).

Concrete Description: A recording or reporting of concrete statements about the here and now.

Concrete Interpretation: Explanation (saying why a concrete statement is so) or deduction (providing causal links between concrete statements).

Assertion: Generalised opinion with little or no support offered or reasons given.

Generalised description; Recording or reporting of generalised statements through use of abstract terms.

Generalised Interpretation: Explanation of why a generalisation *is applicable.*

Generalisation based on other generalisations: An abstract statement based on or supported by other generalisations.

Projection; Hypothesis about a possible future or possible scenario development in a single section of the argument but not carried through the whole piece. The idea being projected may or may not be abstract enough to be sustained through the whole argument.

Speculation: Sustained hypothesis developed through the piece to a conclusion. The idea being put forward must be of sufficient abstraction to be sustainable through the whole argument.

III External Validity

Audience Awareness: Awareness of the wider public views which have been critically reviewed by the writer. *Assumptions*: Writers address issues and construct arguments which appeal to particular audiences. The audience may present additional validity complications, whether through the degree of difference of opinion it holds in relation to the writer or through the heterogeneity of its composition, wherein there is not only a single different opinion but a number of different opinions.

Egocentric: Easiest argument to write. The writer assumes that the audience share the same attitudes and knowledge based. (Aristotle did not recognise this as an argument.)

Cursory awareness of alternate point of view: Argument anticipates an opposing position but does not deal with it.

Acknowledgement of alternate point of view: Argument recognises alternate point of view but does not accept the validity of it.

Appreciation of alternate point of view: Argument recognises the validity of an alternate point of view and qualifies initial position accordingly.

Accommodation of alternate point of view: Argument explicitly acknowledges validity of alternate view and incorporates that view in the structure of the argument, either through particular support and incorporation of that view or through some degree of refutation of the alternate view which recognises the validity of the claim but which posits a strong validity claim to the writer's view.

IV Content Validity

The degree of well-groundedness of evidence.

Within this dimension each item represents a different facet of being well grounded and each is rate on a Poor-to-Excellent continuum on a 1 (Little or no attempt made) - 5 (excellent) scale. A ranking of '3'3 represents adequacy within the feature.

Truthfulness of Evidence: Objectivity; authority of evidence

Selection of Evidence: The potential of the evidence chosen to support the thesis. (The evidence may or may not be shown to be related to the thesis; this item, rather, indicates the *potential* of the evidence chosen.)

Interpretation of evidence: Analysis or discussion of evidence. The more developed this item is, the more explicitly will be the relation of evidence to thesis and the more strong the evidence will be shown to be.

Normative correctness: Probability of statements; frequency of occurrence.

Source: Berrill, Deborah. 1990. What exposition has to do with argument: argumentative writing of sixteen year olds. *English in Education*, Vol 24, Spring, no. 1: 77-92.

Appendix 9

The Barrett taxonomy: cognitive and affective dimensions of reading comprehension: Barrett (1972)

Literal comprehension

Literal comprehension focuses on ideas and information which are *explicitly* stated in the selection. Purposes for reading and teacher's questions designed to elicit responses at this level may range from simple to complex. A simple task in literal comprehension may be the recognition or recall of a single fact or incident. A more complex task might be the recognition or recall of a series of facts or the sequencing of incidents in a reading selection. Purposes and questions at this level may have the following characteristics.

Recognition requires the student to locate or identify ideas or information *explicitly* stated in the reading selection itself or in exercises which use the explicit ideas and information presented in the reading selection. Recognition tasks are:

Recognition of details. The student is required to locate or identify facts such as the names of characters, the time of the story, or the place of the story.

Recognition of main ideas. The student is asked to locate or identify an explicit statement in or from a selection which is a main idea of a paragraph or a large portion of the selection.

Recognition of a sequence. The student is required to locate or identify the order of incidents or actions explicitly stated in the selection.

Recognition of comparison. The student is requested to locate or identify likenesses and differences in characters, times and places that are explicitly in the selection.

Recognition of cause and effect relationships. The student in this instance may be required to locate or identify the explicitly stated reasons for certain happenings or actions in the selection.

Recognition of character traits. The student is required to identify or locate explicit statements about a characters which helps to point up the type of person he is.

Recall requires the student to produce from memory ideas and information *explicitly* stated in the reading selection. Recall tasks are:

Recall of details. The student is asked to produced from memory facts such as the name of characters, the time of the story, or the place of the story.

Recall of main ideas. The student is required to state a main idea of a paragraph or a larger portion of the selection from memory when the main idea is explicitly stated in the selection.

Recall of a sequence. The student is asked to provide from memory the order of incidents or actions explicitly stated in the selection.

Recall of comparison. The student is required to call up from memory the likenesses and differences in characters, times, and places that are explicitly stated in the selection.

Recall of cause and effect relationships. The student is requested to produced from memory explicitly stated reasons for certain happening or actions in the selection.

Recall of character traits. The student is asked to call up from memory explicit statements about characters which illustrate the type of persons they are.

Re-organisation

Re-organisation requires the student to analyse, synthesise, and/or organise ideas or information explicitly stated in the selection. To produce the desired thought product, the reader may utilise the statements of the author verbatim or he may paraphrase or translate the author's statements. Reorganisation tasks are:

Classifying. In this instance the student is required to place people, things, places, and/or events into categories.

Outlining. The student is requested to organised the selection into outline form using direct statements or paraphrased statements from the selection.

Summarising. The student is asked to condense the selection using direct statements or paraphrased statements from the selection.

Synthesising. In this instance, the student is requested to consolidate explicit ideas or information from more than one source.

Inferential comprehension

Inferential comprehension is demonstrated by the student when he uses the ideas and information explicitly stated in the selection, his intuition, and his personal experience as a basis for conjectures and hypotheses. Inferences drawn by the student may be either convergent or divergent in nature and the student may or may not be asked to verbalise the rationale underlying his inferences. In general, then, inferential comprehension is stimulated by purposes for reading and teachers' questions which demand thinking and imagination that go beyond the printed page.

Inferring supporting details. In this instance the, student is ask to conjecture about additional facts the author might have included in the selection which would have made it more informative, interesting or appeal.

Inferring main ideas. The student is required to provide the main idea, general significance, theme, or moral which is not explicitly stated in the selection.

Inferring sequence. The student, in this case, may be requested to conjecture as to what action or incident might have taken place between two explicitly stated actions or incidents, or he may be asked to hypothesise about what would happen next if the selection had not ended as it did but had been extended.

Inferring comparisons. The student is required to infer likenesses and differences in characters, times , or place. Such inferential comparisons revolve around ideas such as; 'here and there', 'then and now', 'he and she', and 'she and he'.

Inferring cause and effect relationships. The student is required to hypothesise about the motivations of characters and their inter-actions with time place. He may also be required to conjecture as to what caused the author to include certain ideas, words, characterisations, and actions in his writing.

Inferring character traits. In this case, the student is asked to hypothesise about the nature of characters on the basis of explicit clues presented in the selection.

Predicting outcomes. The student is requested to read an initial portion of the selections an don the basis of this reading he is required to conjecture about the outcome of the selection.

Interpreting figurative language. The student, in this instance, is asked to infer literal meaning from the author's figurative use of language.

Evaluation

Purposes for reading and teacher's questions, in this instance, require responses by the student which indicate that he has made an evaluative judgement by comparing ideas presented in the selection with external criteria provided by the teacher, other authorities, or other written sources, or with internal criteria provided by the reader's experiences, knowledge, or values. In essence evaluation deals with judgement and focuses on qualities of accuracy, acceptability, desirability, worth, or probability of occurrence.

Evaluative thinking may be demonstrated by asking the student to make the following judgements.

Judgements of reality or fantasy. Could this really happen? Such a question calls for a judgement by the reader based on his experience.

Judgements of fact or opinion. Does the author provide adequate support for his conclusions. is the author attempting to sway your thinking? Questions of this type require the student to analyse and evaluate the writing on the basis of the knowledge he has on the subject as well as to analyse and evaluate the intent of the author.

Judgements of adequacy and validity. Is the information presented here in keeping with what you have read on the subject in other sources? Questions of this nature call for the reader to compare written sources of information, with an eye toward agreement and disagreement or completeness and incompleteness.

Judgements of appropriateness. What part of the story best describes the main character? Such a question requires the read to make a judgement about the relative adequacy of different parts of the selection to answer the question.

Judgements of worth, desirability and acceptability. Was the character right or wrong in what he did? Was his behaviour good or bad? Questions of this nature call judgements based on the reader's moral code or his value system.

Appreciation

Appreciation involves all the previously cited cognitive dimensions of reading, for it deals with the psychological and aesthetic impact of the selection on the reader. Appreciation calls for the student to be emotionally and aesthetically sensitive to the work and to have reaction to the worth of its psychological and artistic elements. Appreciation includes both the knowledge of and the emotional response to literary techniques, forms, styles and structures.

Emotional response to the content. The student is required to verbalise his feelings about the selection in terms of interest, excitement, boredom, fear, hate, amusement, etc. It is concerned with the emotional impact of the total work on the reader.

Identification with characters or incidents. Teachers' questions of this nature will elicit a response from the reader which demonstrate his sensitivity to, sympathy for, and empathy with characters and happenings portrayed by the author.

Reactions to the author's use of language. In this instance the student is required to respond to the author's craftsmanship in terms of the semantic dimensions of the selection, namely, connotations and denotations of words.

Imagery. In this instance, the reader is required to verbalise this feelings with regard to the author's artistic ability to paint world pictures which cause the reader to visualise, smell, taste, hear, or feel.

Source: Barrett, Thomas C. 1972. Taxonomy of the Cognitive and Affective Dimensions of Reading Comprehension'. In *Reading Today and Tomorrow*, ed. A. Melnik and J. Merritt: 55-61. London: University of London Press.

Appendix 10

Proposed indicators of classroom thoughtfulness: Newmann (1990)

General

There was sustained examination of a few topics rather than superficial coverage of many: Mastery of higher challenges requires in-depth study and sustained concentration on a limited number of topics or questions. Lessons that cover a large number of topics give students only a vague familiarity or awareness and, thereby, reduce the possibilities for building the complex knowledge skills and dispositions.

The lesson displayed substantive coherence and continuity: Intelligent progress on higher order challenges demands systematic inquiry that builds on relevant and accurate substantive knowledge in the field and that works towards the logical development and integration of ideas. In contrast, lessons that teach material as unrelated fragments of knowledge, without pulling them together, undermine such inquiry.

Students were given an appropriate amount of time to think, that is, to prepare response to questions: Thinking takes time, but often recitation, discussion, and written assignments pressure students to make responses before they have had enough time to reflect. Promoting thoughtfulness, therefore, requires periods of silence where students can ponder the validity of alternative response, develop more elaborate reasoning and experience patient reflection.

Teacher behaviour

The teacher asked challenging questions and/or structured challenging tasks (given the ability level and preparation of the students): By our definition higher order thinking occurs only when students are faced with questions or tasks that demand analysis, interpretation or manipulation of information; that is, non-routine mental work. In short, students must be faced with the challenge of how to use prior knowledge to gain new knowledge rather than the task of merely retrieving prior knowledge.

The teacher carefully considered explanations and reasons for conclusions: The resolution of higher order challenges often depends not simply upon offering explanations and reasons, but upon the quality of explanations or reasoning given to support conclusions. Rigorous analysis and evaluation of reasoning, therefore, is central to the promotion of thoughtfulness.

The teacher pressed individual students to justify or to clarify their assertions in a Socratic manner: Socratic interchanges probe an individual's level of understanding. Such dialogue presses the student to consider the validity of evidence and reasoning, to suggest alternative perspectives that may otherwise escape attention, and to identify rather rigorously what one does and does not know. These probes usually constitute their own higher order challenges as they facilitate develop of knowledge on the topic in question.

The teacher encouraged students to generate original and unconventional ideas, explanations or solutions to problems: Higher order challenges can require creative, intuitive insights and alternative perspectives that diverge from conventional knowledge or from expected lines of reasoning. Promoting this sort of mental flexibility will help students to cope not only with ill-structured problems that may explicitly invite creativity, but also with well-structured one's that may require unconventional thinking.

The teacher showed an awareness that not all assertions emanating from authoritative sources are absolute or certain: Curiosity and scepticism about the creation of knowledge and the nature of truth are dispositions of thoughtfulness that help to sustain higher order thinking. For these dispositions to be promoted, authoritative sources must not always be accepted uncritically. Instead, students must be made aware that what may pass as final, conclusive knowledge may often be problematic and subject to future revision and development.

Students' personal experience (where relevant) was integrated in the lesson: Student engagement with and comprehension of a problem can often be enhanced if inquiry on the problem is related to students' actual life experiences.

The teacher was a model of thoughtfulness: To help students succeed with higher order challenges, teachers themselves must model thoughtfulness as they teach. Of course, a thoughtful teacher would demonstrated many of the behaviours described above, but this dimension is intended to capture a cluster of additional characteristics likely to be found in any thoughtful person. Key indicators include showing interest in students' ideas and in alternative approaches to problems; showing how he/she thought through a problem (rather than only the final answer); and acknowledging the difficulty of gaining a definitive understanding of problematic topics.

Student behaviour

Students offered explanations and reasons for the conclusions: The answers of solutions to higher order challenges are rarely self-evident. Their validity often rests on the quality of explanation or reasons given to support them. Therefore, beyond offering answers, students must also be able to produce explanations and reasons to support their conclusions.

Students generated original and unconventional ideas, explanations, hypothesis or solutions to problems: this is a counterpart to dimension 8. Higher order thinking is more evident in classrooms in which teacher not only encourage original responses from students, but where students supply them.

Students assumed the roles of questioner and critic: As students work toward answers for higher order challenges, they are more likely to succeed if they have opportunities to ask questions about and to criticise proposed approaches and answer. In contrast, if students act primarily as passive recipients of information, they are not likely to develop the level of understanding needs to carry out useful analyses and interpretations.

Student contributions were articulate, germane to the topic and connect to prior discussion: In a formal sense, students may respond actively with assertions, explanations, questions and creative ideas, but these may be inarticulate or irrelevant to the topic being examined. Just as dimension 2 requires substantive coherence and continuity in the lesson as a whole, student participation cannot be considered thoughtful unless it is reasonably articulate and relevant.

What proportion of students participated verbally in the lesson? To solve higher order challenges, students must actively use their minds. This cannot be observed directly, but one indicator is the extent to which they speak in class about the subject being examined. That is, the more students who produce discourse on a topic the greater the likelihood of higher order thinking by the class as a whole.

What proportion of time did students spend engaged in thoughtful discourse with one another? Because of the importance of dialogue in promoting higher order thinking, yet acknowledging the logistical difficulty of the teacher responding to the ideas of each students, it can be useful students to talk with one another to test and refine their ideas. The amount of thoughtful discourse among students can, therefore, be seen as one indicator of thoughtful discourse in the class as a whole.

What proportion of students showed genuine involvement in the topics discussed? To make progress on higher order challenges, students must give their attention, concentration and mental effort. We summarise these dimensions of involvement as student engagement. One indicator is observable verbal participation, but it is also possible to become intensely involved while listening. This dimension assesses the extent of student engagement based on cues other than the frequency of speaking. Principal dimensions, include raising hands, attentiveness manifested by facial expression and body-language, interruptions in the discussion to raise a substantive point or question, the length of student responses.

Source: Newmann, Fred M. 1990. Higher order thinking teaching social studies; a rational for the assessment of classroom thoughtfulness. *Journal of Educational Studies,* Vol 22, no 1: 41-56.

Appendix 11

A suggested approach for the subject teacher: Newmann (1990)

Newmann's proposal for a subject approach in social studies could very well be adopted by heads of subject departments conducting curriculum audits, evolving policy, or teacher-training colleagues.

Newmann (1990:48) suggests that:

To increase knowledge about how to promote higher order thinking, an approach to research might follow steps such as the following:

1. Identify the main problems or challenges that students should be competent to address (e.g. explanations of historical trends; developing positions on social issues; estimating and forecasting with sociological, economic or geographic data).

2. For each problem, identify the specific body of in-depth knowledge, the cluster of analytic skills, and the main dispositions need for success in addressing the problem.

3. Experiment with alternative methods for teaching the specific knowledge, skills and dispositions relevant to each problem.

4. Codify the results to produce guidelines for curriculum and pedagogy most likely to assist students in resolving the major cognitive challenges in social studies.

5. The dimensions should be able to be observed in the teaching of a variety of subject matter and skills within *(the subject)*.

The dimensions should refer to teacher behaviour, to student behaviour and to activities involving both teacher and student.

The exploratory scheme should contain many dimensions which, on the basis of further theoretical and empirical analysis, might later be reduced to a small number of essential 'scales'.

The dimensions should be conceptualised in ways that might later be used to help teachers reflect on their practice.

Source: Newmann, Fred M. 1990. Higher order thinking teaching social studies; a rational for the assessment of classroom thoughtfulness. *Journal of Educational Studies*, Vol 22, no 1: 48.

Appendix 12

The Lipman teaching approach to questioning: Lipman (1980)

Lipman (1980:16) suggests that questions to ask could include:

1. Why? - requests an explanation for the basis of a child's responses

2. If that is so, what follows? - asks pupils to elaborate, extrapolate, draw a valid inference; hypothetical or causal

3. Aren't you assuming that? - asks for explanation of premises upon which a statement or argument might be based.

4. How do you know that? - calls for more information, a source of information or for a student to explain his or her line of reasoning.

5. Is the point you are making that? - requests confirmation of that teacher's clarification, focusing on the main point of a pupil's response.

6. Can I summarise your point as? - asks for the pupil to confirm the teacher's restatement or condensation of his or her statement.

7. Is what you mean to say that? - a rephrasing that allows the pupils to interpret their statements and be certain of their meaning.

8. What is your reason for saying that? - a request for a rationale that offers criteria for making the certain judgement and a justification for that rationale.

9. Doesn't what you say presuppose that? - the teacher points out assumptions that might be hidden in a student's argument or point, requiring the student to explain the validity of his or her assumptions.

10. What do you mean when using this word? - a request for precise meaning and contextual usage.

11. Is it possible that? - the teacher offers possibilities and points out possible contradictions and inconsistencies in the pupil's argument.

12. Are there other ways of looking at it? - a call for alternative perspectives, connections. A check on objectivity and impartiality.

13. How else could we view this matter? - gives students a chance to be creative. Stress flexibility and open-endedness.

Source: Lipman, Matthew, et al. 1980. Philosophical Enquiry: *An Instructional Manual to Accompany Harry Stottlemeier's Discovery*. 2nd ed. Upper Montclair NJ.: Montclair State College & Institute for the Advancement of Philosophy for Children.

Appendix 13

Six characteristics of constructivism: Driver (1988)

Driver (1988:138) offers these defining characteristics of constructivism:

1. Learners are not viewed as passive but are seen as purposive and ultimately responsible for their own learning. They bring their own prior conceptions to learning situations.

2. Learning is considered to involve an active process on the part of the learning. It involves the construction of meaning and often takes place through inter-personal negotiation.

3. Knowledge is not 'out there' but is personally and social constructed, its status is problematic. It may be evaluated by the individual in terms of the extent to which it 'fits' with their experience and is coherent with other aspects of their knowledge.

4. Teachers also bring their prior conceptions to learning situations not only in terms of their subject knowledge but also their views of teaching and learning. These can influence their way of inter-acting in classrooms.

5. Teaching is not the transmission of knowledge but involves the organisation of the situations in the classroom and the design of tasks in a way which promote scientific learning.

6. The curriculum is not that which is to be learned, but a programme of learning tasks, materials and resources from which students construct their knowledge.

Source: Driver, R. 1988. Theory into Practice II: A Constructivist Approach to Curriculum Development. In *Development and Dilemmas in Science Education*, ed. Peter J. Fensham: 121-133. London: Falmer Press.

Appendix 14

Assessment Domains: The Cambridge History Project (1992)

Domain 1: Historical Enquiry (Concept Domain)

Levels and Descriptors:

Demonstrates understanding that statements of historical fact should be tested for consistence with the totality of available and relevant evidence.

Demonstrates understanding statements of historical fact rely upon interpretations of evidence that should be congruent with what is known about time and place, and about prior and subsequent events.

Demonstrates understanding that statements of historical fact are of many kinds (about beliefs and about deeds, about single events and about general states of affairs), and that the status and nature of these different claims to knowledge may vary.

Domain 2: Using Sources as Evidence (Skill Domain)

Levels and Descriptors:

Can evaluate a given hypothesis by reference to reliable and relevant evidence taken and inferred from a range of sources.

Can adjudicate between contradictory hypotheses by reference to reliable and relevant evidence taken and inferred from a range of sources.

Can use sources as evidence in order to generate and arbitrate amongst contradictory and/or contrary hypotheses.

Domain 3: Cause and Motive (Concept Domain)

Levels and Descriptors:

Demonstrates understanding that the phenomena historians seek to explain may be variously characterised with reference to past events, to the actions of predecessors and to past ideas and systems of belief.

Demonstrates understanding of the nature and status of three modes of explanation - empathetic, intentional and causal - used to make sense of the past.

Can use sources of evidence in order to generate and arbitrate amongst contradictory and / or contrary hypotheses.

Domain 4: Offering Explanations (Skills Domain)

Levels and Descriptors:

Can propose and evaluate explanations by establishing connections obtaining within or between patterns of ideas, actions and events.

Can propose and evaluate explanations of ideas, actions and events by comparing them with similar phenomena or sequences of events.

Can propose and evaluate explanations of ideas, actions and events by considering the 'actual' in relation to the 'possible'.

Domain 5: Change and Development (Concept Domain)

Levels and Descriptors:

Demonstrates understanding of the ways in which significance may be attributed to even as trends and turning points, 'dead-ends' and 'false dawns' within a line of development through time.

Demonstrates understanding that lines of development are theories about as well as representations of the past, and that difference and competing lines of development may be advanced in order to describe and make sense of any part of it.

Demonstrates understanding of the reasons why and the ways in which different and competing lines development may co-exist and be integrated within a single historical account.

Domain 6: Constructing Accounts (Skill Domain)

Levels and Descriptors:

Can select and organise material so as to construct developmental narratives.

Can select, organise and interpret material so as to construct alternative developmental narratives.

Can select, organise and interpret material so as to construct coherent narratives that make reference to concurrent sequences of events and different lines of development.

Source: Cambridge History Project. 1992. *Pilot Scheme Syllabus*. Cambridge: Cambridge University Press. Cited in Mitchell. 1992a. *The Teaching and Learning of Argument in Sixth Forms and Higher Education; Interim Report*. Hull: University of Hull.

Appendix 15

Six defining characteristics of the discourse community: Swales (1990)

1. A broadly agreed set of common public goals.

2. Mechanisms of intercommunication among its members.

3. Uses its participatory mechanism primarily to provide information and feedback.

4. Utilises and hence possesses one or more genres in the communicative furtherance of its aims.

5. In additional to owning genres, has acquired some specific lexis.

6. Has a threshold level of members with a suitable degree of relevant content and discoursal expertise.

Source: Swales, John. 1990. *Genre Analysis: English in academic and research settings*: 24-27. Cambridge: Cambridge University Press.

Appendix 16

Five theses concerning narrative: Fox (1989)

1. Experience

Many of the stories these children have heard have become important metaphors for their inner affective lives and for their outer social experiences.

2. Affect

The personal power of those metaphors is what has embedded the language and rhetoric of story-telling so firmly in the children's competencies.

3. Culture

Having heard stories read aloud from an early age the children have internalised highly literature and literary ways of telling.

4. Language

By practising making story metaphors for themselves the children re-invent the rhetoric and language of story, generating verbal form they would normally have no opportunity to bring forth.

5. Cognition

The rhetoric of narrating includes all the devices at the levels of word, sentence, and story, which the children will need later on to conduct a reasoned argument.

Source: Fox Carol. 1989a. Divine Dialogues: the role of argument in the narrative discourse of a five-year-old storyteller. In *Narrative and Argument*, ed. Richard Andrews: 33-42. Milton Keynes & Philadelphia: Open University Press.

Appendix 17.

Content analysis of the Schools Curriculum and Assessment Authority *Draft Proposals for the Review of the National Curriculum* : Thornbury (1995)

Content analysis by Thornbury (1995b) identified the pre-philosophical thinking required by the National Curriculum, as reflected in its evidence criteria for assessment purposes.

The analysis classified references to criteria of assessment in thinking, argument, or philosophical topics in the eight subject areas, into four alphabetically-listed, syntactical categories.

Nouns and noun phrases, gerunds:

ability to follow (the thread of) an argument, adequacy of evidence, anomalies, applying principles, argument, autobiography, awe, bias, conditional probabilities, consideration (of ideas) (balance of feeling and thinking) (feelings and emotions as valid responses), conjectures, controversy, cosmogony, criteria, cross-references (making of), debate, description, desire (to search for the meaning of life) development of thinking, economy with elegance; ethical dilemmas, empathy, explanation, exploration (and hypothesis), fact, feelings of transcendence, generating (ideas), innermost thoughts, interpretation, identifying (implications), judging, meaning of life, meanings beyond the literal, mutually exclusive events, mystery, objectivity, opinion, organising and expressing ideas (distinctive ways of), personal interest in metaphysical questions, persuasions, predictions (and fair tests), provisionality of explanation, recognising (inconsistencies), reasons, reasoned conclusions, reliability, reviewing, register, synthesise (others' ideas), wonder.

Verbs or verb phrases:

agree to differ, analyse (argument and opinion), check (for repetitions, vagueness, errors, omissions, repetitions), cite evidence, clarify, develop (initial ideas), consider (an argument critically), distinguish (between fact and opinion) (indicators of speaker's intentions), draft, evaluate, extend thinking, initiate and sustain (conversations), justify, negotiate (consensus), plan, predict (outcomes, consequences of decisions, consequences and implications), (pose) pertinent questions, proof-read, recognise inconsistencies, remove ambiguity and vagueness (of texts), represent (information in different forms), structure, summarise (main points), support opinions (by reference to text), sustain (and develop interpretations of texts), synthesise, think and feel, identify (e.g. meanings beyond the literal), investigate, use range of discourse (markers), write extensively for aesthetic and imaginative purposes.

Adverbs:

assessing critically, (thinking) coherently, (examining) critically, making appropriate connections, modifying ideas, persuasively, responding cogently (to a range of texts).

Adjectives:

apt and careful comparison (between texts), aesthetic and imaginative purposes (in writing); argumentative (writing); (be) imaginative and creative, discursive (writing), elegant proof, intuitive probability, ethical dilemma, persuasive (writing).

Source: Thornbury, Robert. 1995b. *A Content analysis of the Schools Curriculum and Assessment Authority Draft Proposals for the Review of the National Curriculum.* Paper given to the Conference of Teachers of A Level Philosophy, at Institute of Education, University of London, November 12th 1995.

Appendix 18

Measuring and Recording Critical Thinking Skills and Sub-skills & Critical Thinking Dispositions: Facione and Facione(1992)

Critical Thinking: Cognitive skills and sub-skills

Interpretation:	categorisation decoding sentences clarifying meaning
Analysis:	examining ideas identifying arguments analysing arguments
Evaluation:	assessing claims assessing arguments
Inference:	querying evidence conjecturing alternatives drawing conclusions
Explanation:	stating results justifying procedures presenting arguments
Self-regulation:	self examination self correction

Critical Thinking Dispositions

Truth seeking: a courageous desire for the best knowledge, even if such knowledge fails to support or undermines one's preconceptions, beliefs or self interests.

Open-mindedness: Tolerance to divergent views, self-monitoring for possible bias.

Analyticity: Demanding the application of reason and evidence, alert to problematic situations, inclined to anticipate consequences.

Systematicity: Valuing organisation, focus and diligence to approach problems of all levels of complexity.

Self-confidence: Trusting of one's own reasoning skills and seeing oneself as a good thinker

Inquisitiveness: Curious and eager to acquire knowledge and learn explanations even when the applications of the knowledge are not immediately apparent.

Maturity: Prudence in making, suspending, or revising judgement. An awareness that multiple solutions can be acceptable. An appreciation of the need to reach closure even in the absence of complete knowledge.

Source: Facione and Facione (1990): *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction: The Delphi Report*

Appendix 19

Holistic Critical Thinking Scoring Rubric: Facione and Facione (1994).

Rate 4. Consistently does all of almost all of the following:

Accurately interprets evidence, statements, graphics, questions etc.
Identifies the salient arguments (reasons and claims) pro and con
Thoughtfully analyses and evaluates major alternative points of view
Draws warranted, judicious, non-fallacious conclusions
Justifies key results and procedures, explains assumptions and reasons

Rate 3. Does most or many of the following:

Accurately interprets evidence, statements, graphics, questions, etc.
Identifies relevant arguments (reasons and claims) pro and con
Offers analyses and evaluations of obvious alternative points of view
Draws warranted, non-fallacious conclusions
Justifies some results or procedures, explains reasons
Fair-mindedly follows where evidence and reasons lead

Rate 2. Does most or many of the following:

Misinterprets evidence, statements, graphics, questions etc.
Fails to identify strong, relevant counter-arguments
Ignores or superficially evaluates obvious alternative points of view
Draws unwarranted or fallacious conclusions
Justifies few results or procedures, seldom explains reasons
Regardless of the evidence or reasons, maintains or defends views based on self interest or pre-conceptions

Rate 1. Consistently does all or almost all of the following:

Offers biased interpretations of evidence, statements, graphics, questions, information or the point of view of others
Fails to identify or hastily dismisses strong, relevant counter-arguments
Ignores or superficially evaluates obvious alternative points of view
Argues using fallacious or irrelevant reasons, and unwarranted claims
Does not justify results or procedures, or explain reasons
Regardless of the evidence or reasons, maintains or defends views based on self-interest or pre-conceptions
Exhibits close-mindedness or hostility to reason

Source : Facione N.C. and P.A. Facione P.A. 1992. *The California Critical Thinking Dispositions Inventory*:

Appendix 20 (i)

Teachers' views about creativity: Fryer and Collings (1991)

Factors mentioned in describing creativity in students

(1028 teachers and lecturers in England and Wales interviewed)

% of teachers mentioning particular factors:

Imagination	88
Original ideas	80
Self expression	73
Discovery	65
Seeing connections	65
Invention	61
Innovation	59
Divergent thinking	53
Thinking processes	51
Awareness of beauty	49
Combining ideas	49
Inspiration	46
Aesthetic products	33
Valuable ideas	32
Unconscious activities	18
Convergent thinking	10
Mysterious processes	9
Tangible products	9
Other aspects	5

Appendix 20 (ii)

Teachers' preferred criteria for assessing the creative content of pupil's work

Criteria	%
Imaginative	87
Original for the pupil	84
Showing initiative	79
Pleasing to the pupil	74
Expressing depth of feeling	70
Expressing an independent viewpoint	66
Demonstrating depth of thinking	64
Demonstrating idea progression	63
Qualitatively better than own previous work	63
Reflecting child's experiences	47
Using appropriate skills	44
Element of surprise	42
Using appropriate media	38
Unique	37
Pleasing to the teacher	34
Qualitatively better than would be expected for a child of that age	34
Pleasing to classmates	29
Attractive	26
Appropriate	23
Qualitatively better than peer performance	23
Useful	13
Complex	8
Accurate	6
Elegant	5
Other	1

Source: Fryer, Marilyn, and John A. Collings. 1991. Teachers' Views about Creativity. *British Journal of Educational Psychology*, Vol 61: 207-219.

Appendix 21

Hierarchically ordered objectives for teaching and assessing empathetic construction: Shemilt (1984)

Objective 1

Differentiation of historical explanation and description

Objective 2

Explanation of behaviour and belief 'from the outside', in terms of stereotypes or general factors

Objective 3 a. & b.

Assumption of a shared humanity with predecessors

Action explained in terms of motive

Objective 4 a. & b.

Explanation of behaviour and belief 'from the inside' by means everyday empathy - universal or twentieth century empathising

Motives analysed in terms of possibilities for action

Objective 5 a. & b.

Empathetic construction of situation - people had different ideas from us because their situation differed from ours

Analysis of intentional action in terms of the information available, character, aspiration and experience

Objective 6 a. & b.

Empathetic construction of perspective - genuine historical empathy

Analysis of intentional action within period - standards and assumptions of the time

Ideas and values, norms and mores of predecessors likely to differ from those of contemporaries

Actions and beliefs of predecessors are rational within their frame of reference

Objective 7

Beliefs of predecessors consonant with their social organisation and means of production

Objective 8

Contemporary *Lebensform* are genetically related to those of the past

Objective 9

Past *Lebensform* were structurally coherent. Ability to recreate a sense of period in the round.

Source: Shemilt, D. 1984. Beauty and the Philosopher: Empathy in History and Class; in *Learning History*, ed. A. K. Dickinson: 80. London: Heinemann

Appendix 22

Issues arising within a whole school or college: The Sir Rene Descartes Comprehensive School Case Study: Thornbury (1994)

The curriculum and human resource management problem.

You are standing in for the management and 'whole curriculum planning' consultant to a new school or college. It opens next year (January 1995). The consultant has returned late from holiday - and cannot be contacted.

Most of the key staff have been appointed and the head of institution is already in post. The senior management team, and most of the staff of the new school or college have been appointed. They met recently for a day's planning and development work on 'The Learning Institution'.

The governing body have had a presentation on the subject from a Critical Thinking specialist (the same one as you had). Some of them are very keen on the contribution that CT can make to learning in the work-place. They have gained funding support from local industry which the main governing body have accepted. Half of this funding is to be used to pay for one dept to act as the development base for CT work, with one of its members seconded half-time.

Your TASK as the consultant.

The Governors want the Senior Management team to have in place from Day 1 a whole institutional policy which incorporates the best of what is proposed.

You have been asked, at very short notice, to give the best advice you can on the limited evidence available.

You have to write a paragraph which indicates that the institution has decided on a single particular curriculum and management strategy in some detail for CT innovation - although you can reserve your right to change in response to circumstances.

The grant will automatically be available provided you meet the written criteria - and the application is due in tomorrow afternoon. (The governors and staff have agreed to go along with whatever you recommend).

Consider the main proposals and rank them in order of priority for implementation (in your view). It seems that each of the Departments is prepared to nominate a strong individual candidate to act as Project Co-ordinator, working to a senior management and departmental steering group.

You have a number of papers from heads or department or staff responsible for particular areas of work in front of you.

QUESTIONS you should address are:

Which department(s) should provide leadership?

What is the best human resource strategy?

What is the best curriculum planning strategy?

What is the best institutional improvement strategy?

What is the most appropriate accountability strategy?

The EVIDENCE you should base your judgement arises in the following proposals:

1. The Special Needs Department considers that leadership in a CT policy for the whole institution should be led by them. 'This is the equivalent of our curriculum. We should lead, resource and set the teaching approaches.'

2. The ESOL Department considers that, since so much of their work overlaps in this area that they should lead on policy and provision. But they wish to join with the English Department.

3. The English Department have done some work in this area and point to the University of Hull Project, in which staff participated, which concluded "the curriculum leaders for any work on argument are of course the teachers of English".

4. The Pastoral, Social and Health Ed Department point out that they have the equivalent of one hour a week in which they already lead on study skills- and CT is to some extent already included. 'We would expand our approach taking on board the broader notion of thinking.'

5. The Science Department have been involved in the CASE (Cognitive Acceleration in Science Education Programme) which provides extra teaching in thinking as a foundation for later success in all subjects. 'Time spent on thinking training in extra science periods can be coupled with de Bono and Feuerstein's approaches in later years. Science should lead all this because it understands what is involved.'

6. A group of enthusiasts on the staff want to regard CT as the pre-philosophical curriculum and offer a special programme which some, or all, students might take. The only teacher with experience in teaching A level philosophy is proposed as the 'only person combining sufficient subject expertise and strong personal leadership qualities' - and therefore the best person to lead.

7. The Humanities Department support the cross-disciplinary group of staff who see CT as the pre-philosophical curriculum and point out that the person with philosophy expertise is a member of their department. Humanities would build up the CT approach as the foundation for citizenship in a democracy. They are very keen on 'flexible teaching and learning' and would set up a schools council linked with the project. They would link the approach with economic awareness work, linking with local firms.

8. The Computing Studies Department, jointly with the Library, points out that any scheme should ideally be 'communication and informatic sciences' led. They would be prepared to do this, working on a Flexible Teaching and Learning Centre in conjunction with the library staff.

Source: (Thornbury 1994). Prepared for Summer School of the Open University Management Education M.A. and delivered at Royal Holloway College, August 14th and 21st 1994.

Appendix 23

Some Theoretical Concepts in Research on Teacher Training: Pope (1993)

TEACHERS' UNDERSTANDINGS	Bussis, Chittenden and Amarel, 1976
TEACHER CONSTRUCTS	Olson, 1980
DECISION STRATEGIES	Borko and Caldwell, 1982
METAPHORS/BELIEFS	Munby, 1982
PRACTICAL KNOWLEDGE	Elbaz, 1983
TEACHERS' VOICE	Butt, 1984
PERSONAL INTENTIONS	Day, 1984
TEACHERS' COGNITION	Huber and Mandl, 1984
TEACHERS' CONCEPTIONS	Larsson, 1984
INTUITIVE THEORIES	Pope and Denicolo, 1984
PERSONAL CONSTRUCTS	Pope and Scott, 1984
KNOTS/IMPERATIVE COGNITIONS	Wagner, 1984
TEACHERS' COGNITIVE ACTIVITIES	Bromme and Brophy, 1985
IMAGE	Clandinin, 1985
PERSONAL PRACTICAL KNOWLEDGE	Connelly and Clandinin, 1985
TEACHERS' PERSPECTIVES	Tabachnik and Zeichner, 1985
EXPERT PEDAGOGUE	Berliner, 1986
PROFESSIONAL CRAFT KNOWLEDGE	Brown and MacIntyre, 1986
SCRIPTS/SCHEMA	Clark and Peterson, 1986
SUBJECTIVE THEORIES	Krause, 1986
DILEMMAS	Lampert, 1986
ROUTINES	Leinhardt and Greeno, 1986
PLANS	Clark and Yinger, 1987

Source: Pope, Maureen. 1993. Anticipating Teacher Thinking. In *Research on Teacher Thinking, Understanding Professional Development*, ed. C. Day et al.: 19-34. London: Falmer Press.

Appendix 24

Key questions for a staff to ask themselves in planning a philosophy and pre-philosophical curriculum (Thornbury 1995)

1. Where do we stand individually and collectively, as a staff, on the 'strong version' of claims for teaching philosophy and a pre-philosophical curriculum?

2. What are our existing philosophical assumptions in relation to the curriculum, pedagogy and management of our institution ?

3. What implications arise for us if we accept the transcendental claim that philosophy pervades all curricular, pedagogic and organisational arrangements?

4. What importance do we attach to each of the other curriculum aims which have been put forward, e.g. possibilism, cognitive or the engendering of dispositions?

5. How, if we think we should, can we begin to build a whole school approach to philosophy teaching which relates to school organisation, pedagogy and curriculum?

6. What priorities emerge in relation to our individual and collective response to these various claims and purposes that have been put forward in relation to a philosophy and pre-philosophical curriculum?

7. How do we respond to particular statutory or externally mounted claims such as arise from the National Curriculum, the QCA, OFSTED, the TTA, examination boards and a wide range of local interest groups, including minorities?

8. What equity and rights, equal opportunities, gender and special educational needs issues do we need to address?

9. What rights and responsibilities do the various partners, students, teachers, parents and governors, have in the enterprise of a whole school policy for philosophy, higher order thinking and a pre-philosophical curriculum?

10. How shall we communicate and consult over our policy on philosophy and the pre-philosophical curriculum?

11. How shall we work together in developing the pre-philosophical curriculum in a way which is consistent with the position we have taken up ideologically?

12. Can we therefore agree on a common framework, or canon, in our approach?

13. Shall we proceed collegially as a community of enquiry (including the students) or in some other way in implementing our approach?

14. Who should assume leadership, institutionally and in particular areas of curriculum application?

15. What is to be our approach to each of the separate strands in curriculum development in this area, i.e. in the teaching of philosophy, critical, creative, and higher order thinking, values education in virtues and dispositions, problem-solving, thinking skills and study skills?

16. What is to be our approach to pedagogy in each of the content and specialist subject areas, and more generally?

17. Should philosophy be separately taught for part of the school period, or for all of it and should there be a cross-curricular form of provision?

18. How shall we know when we have taught philosophy and the pre-philosophical curriculum successfully?

19. How should we conduct assessment - what is to be our assessment policy?

20. How do we review our progress as a school in relation to the implementation of a whole school policy?

21. What are the implication for teachers' own professional and personal development, thinking and philosophical education?

22. What is our existing range of resources and strategies for undertaking these tasks?

23. What additional resources do we need?

Source: Thornbury (1995).

Appendix 25

Professional Values in the ASSET Programme: Core Assessment Criteria: (Winter 1992)

Criterion No. 1: 'Commitment to Professional Values'.

Demonstrates self-awareness and commitment in implementing professional values in practice. This involves demonstrating:

1. ability to understand and to implement anti-discriminatory, anti-oppressive and anti-racist principles;

2. awareness of the need to counteract one's own tendency (both as a person and as a professional worker endowed with specific powers) to behave oppressively;

3. respect for clients' dignity, privacy, autonomy, and rights as service users;

4. ability to manage complex ethical relationships and value conflicts;

5. ability to empower others.

Source: Winter, Richard. 1992. 'Quality Management' or 'The Educative Work-Place': Alternative Versions of Work-Based Education. *Journal of Further and Higher Education*, Vol 16, no 3, Autumn: 109-110.

Appendix 26

Genre and accessibility relations. (Ryan 1991)

	A	B	C	D	E	F	G	H	I
Accurate non-fiction	+	+	+	+	+	+	+	+	+
True fiction	+	+	+	+	+	+	+	+	+
Realistic and historical fiction	+	-	+	+	+	+	+	+	+
Historical fabulation	-	-	+	+	+	+	+	+	+
Realistic fiction in 'no-man's land'	-	-	-	+	+	+	+	+	+
Anticipation	+	-	+	-	+	+	+	+	+
Science fiction	+/*	-	+/-	-	+	F+ F'-	+	+	+
Fairy tale	*	-	-	+	-	-	+	+	+
Legend	-	-	+	+	-	-	+	+	+
Fantastic realism	+/*	-	+/-	+	-	+	+	+	+
Nonsense rhymes	*/-	-	-/+	&	-	-/+	-	+/-	+
Jabberwockism	*	-	-	&	-	-	?	+	-$
Sound poetry	*	--	-	&	_	_	_	_	_

Key.
*: non-applicable because of a - on C
&: non applicable because of a- or ? on G
-$: incompatibility restricted to most nouns and verbs

A = identity of properties; B = identity of inventory; C = compatibility of inventory; D= chronological compatibility; E= physical compatibility; F= taxonomic compatibility; F' = taxonomic compatibility for both natural species and manufactured objects); G=logical compatibility; H=analytical compatibility; I= linguistic compatibility.

Source: Ryan, Marie-Laure. 1991. *Possible Worlds, Artificial Intelligence and Narrative Theory*: 34. Indiana: Indiana University Press.

Appendix 27

A typology of mimetic discourse. (Ryan 1991)

	TAW=AW	AW=TRW	TAW=TRW	AS=IS
Non fictional accurate discourse	+	+	+	+
Errors	-	+	-	-
Lies	-	+	-	-
Accidentally true lies	+	+	+	-
Standard fiction	-	-	+	-
True fiction	+	-	+	-
Unreliable narration in fiction	-	-	-	-

Key.

AW= Actual World
TAW= Textual Actual World
TRW= Textual Reference World

Source: Ryan, Marie-Laure. 1991. *Possible Worlds, Artificial Intelligence and Narrative Theory*: 28. Indiana: Indiana University Press.

Appendix 28

Relevant types of accessibility relations from AW (Actual World) involved in the construction of a TAW (Textual Actual World). (Ryan 1991)

(A) Identity of properties
(abbreviated A properties): TAW is accessible from AW if the objects common to TAW and AW have the same properties

(B) Identity of inventory
(B/same inventory): TAW is accessible from AW if TAW and AW are furnished by the same objects

(C) Compatibility of inventory
(C/expanded inventory): TAW is accessible from AW if TAW's inventory includes all the members of AW, as well as some native members

(D) Chronological compatibility
(D/chronology) TAW is accessible from AW if it takes no temporal relocation for a member of AW to contemplate the entire history of TAW. This condition means that TAW is not older than AW, i.e., that its present is not posterior in absolute time to AW's present. We can contemplate facts of the past from the viewpoint of the present, but since the future holds no facts, only projections, it takes a relocation beyond the time of their occurrence to regard as facts events located in the future

(E) Physical compatibility
(E/natural laws): TAW is accessible from AW if they share natural laws.

(F) Taxonomic compatibility
(F/taxonomy): AW is accessible from AW if both worlds contain the same species, and the species are characterised by the same properties. Within F, it may be useful to distinguish a narrower version F' stipulating the TAW must contain not only the same inventory of natural species, but also the same types of manufactured objects as found in AW up to the present

(G) Logical compatibility
(G/logic): TAW is accessible from AW if both worlds respect the principles of non-contradiction and of excluded middle

(H) Analytical compatibility
(H/analytical): TAW is accessible from AW if the language if they share analytical truths, i.e., if objects designated by the same words have the same essential properties

(I) Linguistic compatibility
(I/linguistic): TAW is accessible from AW if the language in which TAW is described can be understood in AW

Source: Ryan, Marie-Laure. 1991. *Possible Worlds, Artificial Intelligence and Narrative Theory*: 32-33. Indiana: Indiana University Press.

Appendix 29

Encompassing definitions for the range of thinking processes relevant to different domains or disciplines. (Donald 1992)

DESCRIPTION	Delineation or definition of a situation or a form of a thing
identify context	Establish surrounding environment to give a total picture
list conditions	List essential parts, prerequisites or requirements
list facts	List known information, events that have occurred
list functions	List normal or proper activity of a thing or specific duties
state assumptions	State suppositions, postulates or propositions assumed
state goal	State the ends, aims, objectives
SELECTION	Choice in preference to another or others
choose relevant information	Select information that is pertinent to the issue in question
order information in importance	Rank, arrange in importance or according to its significance
identify critical elements	Determine units, parts, components which are important
identify critical relations	Determine connections between things that are important
REPRESENTATION	Depiction or portrayal through enactive, iconic or symbolic means
recognise organising principles	Identify laws, methods which arrange in systematic whole
organise elements and relations	Arrange parts, connections into systematic whole
illustrate elements and relations	Make clear by examples the connections between things
modify elements and relations	Change, qualify the parts, connections between things

INFERENCE	Act or process of drawing conclusions from premises or evidence
discover relations between elements	Detect or expose connections between parts, components
discover relations between relations	Detect or expose connections between connections of things
discover equivalences	Detect or expose equality in value, force or significance
categorise	Classify, arrange into parts
order	Rank, sequence, arrange methodically
change perspective	Alter view, vista, interrelations, significance of facts or information
hypothesise	Suppose or form a proposition as a basis for reasoning
SYNTHESIS	Composition of parts or elements into a complex whole
combine parts to form a whole	Join, associate elements, components into a system or pattern
elaborate	Work out, complete with great detail, exactness or complexity
generate missing links	Produce or create what is lacking in a sequence; fill the gap
develop course of action	Work out or expand the path, route or direction to be taken
VERIFICATION	Confirmation of accuracy, coherence, consistency, correspondence
compare alternative outcomes	Examine similarities or differences of results, consequences
compare outcome to standard	Examine similarities or differences of results to a criterion
judge validity	Critically examine the soundness, effectiveness by actual fact
use feed-back	Employ results to regulate adjust, adapt
confirm results	Establish or ratify conclusions, effects, outcomes or products

Source: Janet Gail Donald. 1992. The development of thinking processes in post secondary education: application of a working model. *Higher Education*, Vol 24: 413-430.

Appendix 30

Interview on Conditionals, Counter-Factuals and Possible Worlds with Professor Dorothy Edgington, of University College, Oxford

The interview took place at Birkbeck College, on January 31st 1997. Professor Edgington had previous notice of the range of questions, together with a short briefing paper on the areas of interest to be raised.

Q. Professor Edgington, what is the present position concerning the standing of counter-factual theory and possible worlds within the philosophical profession?

A. The chief thing to say is that it has made us aware of the importance of possibility.

Q. How do you see the pattern of activity in this area as a tradition?

A. It began of course with Leibnitz. Wittgenstein who raised the idea of possible worlds in the Tractatus. Kripke at what must have been a very young age used it to word out a logic of language. X who died a tragic and violent death at Berkeley did more interesting work. The dual initiative by Stalnaker and Lewis in the 1970's onwards carried the whole area forward.

Q. What is the place of conditionals, counterfactual theory and possible worlds now in philosophy teaching?

A. We use it all the time in undergraduate and other teaching, when we say 'Imagine a possible world in which...' Only David Lewis maintains the position that all possible worlds exist. His work is a source of great interest, but he does not have a school of followers. Noone actually takes Lewis' position up, although it is given serious attention. He says 'if only you could go along with me, it makes the answers to so many other problems easier to work on.' Textbooks such as that of Swartz are helpful at the simpler end of teaching.

The chief point about possible worlds, and conditionals, is their heuristic contribution. I am currently having to teach Descartes again, and I am struck how in effect he begins by creating a possible world in which nothing can be securely known - before starting on his actual position. It is a devastatingly good, mind-clearing teaching device.

Q. Would you agree therefore that 'possible worlds' can provide a useful underpinning, philosophical pedagogy for the teaching of philosophy?

A. Very much so. Particularly as a heuristic.

Q. What is your view of Hawthorn's attempt to apply possible worlds to the discipline of historical study and scholarship, using rigorous criteria derived from Stalnaker and Lewis?

A. I know of the book and it sounds an interesting exercise.

Q. Can I raise with you what appears to be a difficulty, affecting aesthetics? It has been suggested that Occam's razor has to be applied - to avoid possible worlds multiplying out of control, there being so many possible. However, elegant proofs in mathematics may be less economical than other one's, for example - Occam's razor would seem at first sight to rule out elegance of formulation. This would be a problem for educationists in that, for example, formal elegance is a criterion of assessment for children's mathematical conjecture within the National Curriculum.

A. I am glad to hear that it is. Lewis' notion of closeness would, I think, accommodate the difficulty you have, concerning the appropriateness of particular possible worlds to problems which have been raised and conjectured about.

Q. In relation to making us aware of possibility why is it, do you think, that the Wittgenstein example is so strange, given that the philosopher was also a mathematician, architect and engineer, who had designed houses, and even locks and thought about these other disciplines?

A. It may be that his illness and tiredness played a part. Certainly in 1950 it was a surprising example to offer of something not expected to happen.

Q. What do you think determines what happens when these cross-disciplinary, or cross-domain, or even cross intelligence links are made; and do you agree that, as some claim, one cannot teach this type of thinking directly? Furthermore, do you have any idea about how one comes to decide, as in the case of Fogel and the American Railways, which obvious truth to challenge counter-intuitively?

A. I think it is a matter of many things occurring to one, many of which one rejects and some of which one goes on to consider further. However, at base I think it is a question of judgement.

Q. Some continental philosophy, that of Heidegger concerning possibility, Sartre concerning facticity and becoming, emphasise attention to counter-factual or possible worlds - what place have they in your view of the subject?

A. We have people in the department who take an interest in this questions, and teach those areas, but in the technical philosophy I do, we do not cover that area. That is not necessarily a rejection of that approach, though.

Q. Do you have a view on the increased interest in, and the work on counter-factual thinking which has been undertaken by psychologists in the last decade?

A. Yes, I am familiar with some of this work and think that it has been of interest to philosophers.

Q. Has any philosophical work been done on those questions of modal logic and 'possible worlds' which theories of multiple intelligence, cross domain thinking, or synaesthesia seem to raise?

A. Not to my knowledge.

Q. Are there any particular developments, publications or pieces of writing on the area?

A. My own article in *Mind* (1995) surveys the state of the field and contains sources. It is quite a large article, some one hundred pages, and therefore covers many of the points which you have raised.

Q. Your own position, that counter-factuals do not need truth-conditions, seems to suggest that probability takes an increased importance?

A. Yes, I agree. That is an important implication of the position I take. I think that is the way we approach counter-factuals in ordinary life as well. Accessibility relations are perhaps the second area I would stress.

Q. Philosophers have taken some interest in metaphor. Ryan in her book *Possible Worlds, Artificial Intelligence and Narrative Theory* attempts to follow Jeffrey and others in making literary categories based on 'possible worlds' theory? Do you have a view on any of these developments?

A. It is not an area I have followed. Ryan's book sounds a surprising mix of approaches.

Q. Have links been made between 'possible worlds' and the considerable interest in metaphor, as a topic for philosophical discussion, in recent years?

A. No. This has not been an area which has aroused discussion in relation to conditionals or possible worlds.

Robert Thornbury: Thank you very much, Professor Edgington, for the time you have given me.

Source: (Thornbury 1997) unpublished.

Appendix 31

An Example of a Graduate Programme Program in Critical and Creative Thinking: (University of Massachusetts at Boston 1994)

The graduate Programme Program in Critical and Creative Thinking (CCT) is a unique and innovate interdisciplinary program which blends philosophy, psychology and education with other academic disciplines. It offers a master of arts degree, a graduate certificate, and a number of non-degree courses, course sequences, and workshops. The CCT program provides students with an understanding of the processes of critical thinking and creativity, and with ways of helping others develop these basis thinking skills in a variety of formal and informal educational settings.

Master of Arts in Critical and Creative Thinking

Students must complete thirty graduate credits for the Master's Degree, including six required core courses, three electives in a specialty content area, and a thesis. Specialty content areas encourage students to become expert at applying critical and creative thinking skills with a particular focus. The program provides three such areas:

1. Moral issues and Moral Education
2. Criticism and Creativity in Literature and the Arts
3. Critical and Creative Thinking in Mathematics, Science, and Technology

Students may also develop individual specialty areas. They may involve such fields as business, developmental psychology, instructional design, language development, dispute resolution and negotiation, and special education.

All Master's candidates complete a thesis under the guidance of an advisor and two committee members. The thesis provides an opportunity for the student to integrate the knowledge and skills gained in various components of the programme into a significant original contribution. These may involve an implementation projects oriented towards the development of thinking skills, an empirical study, a critique of materials or of a programme, or a theoretical development of some major issue.

The Courses

The core courses, each carrying 3 graduate credits, are:

1. CRITICAL THINKING
2. CREATIVE THINKING
3. FOUNDATIONS OF PHILOSOPHICAL THOUGHT
4. ADVANCED COGNITIVE PSYCHOLOGY
5. PRACTICUM: EDUCATIONAL INTERVENTION
6. SEMINAR: ISSUES IN EDUCATIONAL EVALUATION

Electives, each carrying 3 graduate credits, are:

1. HOLISTIC AND INTERACTIVE TEACHING
2. THE DIALOGUE PROCESS
3. MORAL EDUCATION
4. ISSUES AND CONTROVERSIES IN ANTIRACIST EDUCATION
5. CRITICISM AND CREATIVITY IN LITERATURE AND THE ARTS
6. CRITICAL AND CREATIVE THINKING IN SCIENCE AND TECHNOLOGY
7. MATHEMATICS THINKING SKILLS
8. CHILDREN AND SCIENCE
9. METACOGNITION
10. THINKING, LEARNING AND COMPUTERS

Seminars, each carrying 3 graduate credits, are:

1. SEMINAR IN CRITICAL THINKING
2. SEMINAR IN CREATIVITY
3. SEMINAR IN MORAL EDUCATION
4. SEMINAR IN CRITICISM AND CREATIVITY IN ART
5. SEMINAR ON ISSUES IN EDUCATIONAL EVALUATION

Other courses are:

1. INDEPENDENT STUDY
2. SPECIAL TOPICS IN CRITICAL AND CREATIVE THINKING
3. THESIS

Source: Graduate Programme Program in Critical and Creative Thinking Fact Sheet. (University of Massachusetts at Boston, 1994)

Appendix 32

The three features literary, narrative and fiction: (Ryan 1991)

1. LITERARY NARRATIVE FICTION +++.

examples: novels, short stories, drama, epic poetry & in the 'low domain' jokes, romances, thrillers

2. LITERARY NARRATIVE NON FICTION ++-

examples: works of autobiography and history acknowledged as literature, e.g. Rousseau's Confessions, Gibbon's Decline and Fall of the Roman Empire

3. LITERARY NON-NARRATIVE FICTION +-+

example: post-modernist, anti-narrative texts

4. LITERARY NON-NARRATIVE NON-FICTION +--

examples: collections of aphorisms, the writings of Freud, Rousseau, Pascal's Pensees. Lyric poetry belongs in 3 or 4, depending one's definition of fiction

5. NON-LITERARY NARRATIVE FICTION -++

example: unusual, but as in a story re-written as an advertisement, e.g. Rumpelstiltskin in which the frog transforms from one Bank to another

6. NON-LITERARY NARRATIVE NON-FICTION -+-

examples: news reports, works of history, narratives of personal experience, live play by play broadcasts

7. NON-LITERARY NON-NARRATIVE FICTION --+

example: difficult to illustrate. A story-math problem in which a merchant buys some shoes etc.

8. NON-LITERARY NON-NARRATIVE NON-FICTION ---

examples: advertisements (except for the case above); recipes, interviews, textbooks, literary criticism, laws, organised debates, sermons, conducting business, exchanging opinions

'It may be true that most of literature belongs to the category fictions (sic), that the prototypical examples of fiction are narrative texts, and that the fullest variety of narrative techniques is displayed in fiction, the three features literary, narrative and fictional remain distinct, and do not presuppose each other. Every one or nearly every one of their combinations is represented in Western culture' (Ryan 1).

Source: Ryan, Marie-Laure. 1991. *Possible Worlds, Artificial Intelligence and Narrative Theory*. Indiana: Indiana University Press.

Appendix 33

National Forum for Values in Education and Community - Consultation Paper: (School Curriculum and Assessment Authority 1996)

SOCIETY

Values	Principles for action
	On the basis of these values, we as a society should:
We value truth, human rights, the law, justice and collective endeavour for the common good of society. In particular we value families as sources of love and support for all their members and as the basis of a society in which people care for others.	understand our responsibilities as citizens; be ready to challenge values or actions which may be harmful to individuals or communities; support families in raising children and caring for dependants; help people to know about the law and legal processes; obey the law and encourage others to do so; accept diversity and respect people's right to religious and cultural differences; provide opportunities to all; support people who cannot sustain a dignified life-style by themselves; promote participation in our democracy; contribute to, as well as benefit fairly from, economic and cultural resources; make truth and integrity priorities in public life.

RELATIONSHIPS

Values	Principles for action
We value others for themselves, not for what they have or what they can do for us, and we value these relationships as fundamental to our development and the good of the community	*On the basis of these values, we as a society should:* respect the dignity of all people; tell others they are valued; earn loyalty, trust and confidence; work co-operatively with others; be mutually supportive; respect the beliefs, life, privacy and property of others; try to resolve disputes peacefully.

THE SELF

Values	Principles for action
We value each person as a unique being of intrinsic worth, with potential for spiritual, moral, intellectual and physical development and change.	*On the basis of these values, we as a society should:* try to understand our own character, strengths and weaknesses; develop a sense of self-worth; try to discover meaning and purpose in life and how life ought to be lived; try to live up a to shared moral code; make responsible use of our rights and privileges; strive for knowledge and wisdom throughout life; take responsibility for our own lives within our capacities.

THE ENVIRONMENT

Values	Principles for action
We value the natural world as a source of wonder and inspiration, and accept our duty to maintain a sustainable environment for the future.	*On the basis of these values, we as a society should:* preserve balance and diversity in nature wherever possible; justify development in terms of a sustainable environment; repair habits devastated by human development wherever possible; preserve areas of beauty wherever possible; understand the place of human beings within the world.

Source: *National Forum for Values in Education and Community - Consultation Paper*: (School Curriculum and Assessment Authority 1996)

Appendix 34

Four types of hermeneutic thinking relevant to classroom practice: (Thornbury after Gallagher 1992)

Definition:

Hermeneutics within the ancient Greek tradition was the traditional arts of interpretation of the knowledge and wisdom of the gods and the exegetical training necessary for the citizenry. (Gallagher 1992: 324)

The four main approaches to contemporary hermeneutics.

Conservative hermeneutics

The proponents of *conservative hermeneutics* argue that through the development and mastering of a correct methodology a reader is able to understand the objective and universal truths found in a text.

Moderate hermeneutics

Those who advocate *moderate hermeneutics* believe that readers are unable to find objective truths in texts because of the prejudices and limitations found in our language and specific historical context. Instead the readers participates in a 'trusting, optimistic and creative' procedure to produce 'localised meanings' from the text.

Radical hermeneutics

The view of *radical hermeneutics* is advanced by those who claim that original meanings are unattainable and that interpretation is always contingent and relative.

Critical hermeneutics

Those who advocate *critical hermeneutics* assert that the reading of a text involves first, critical reflection on the 'false consciousness' embedded in the text; and then, following that, the promotion of the distortion-free, 'liberating' meaning of the text.

Source: Gallagher, Shaun. 1992. *Hermeneutics and Education.* New York: State University of New York Press and Schwartz.

Appendix 35

The Five Standards of Authentic Instruction (Newmann and Wehlage 1993)

1. Higher-order thinking
2. Depth of knowledge
3. Connectedness to the World
4. Substantive Conversation
5. Social Support for Student Achievement

1. Higher-order thinking

lower-order thinking only 1...2...3..4...5 higher-order thinking is central

2. Depth of knowledge

knowledge is shallow 1...2...3..4...5 knowledge is deep

3. Connectedness to the World

no connection 1...2...3..4...5 connected

4. Substantive Conversation

no substantive conversation 1...2...3..4...5 high level substantive conversation

5. Social Support for Student Achievement

negative social support 1...2...3..4...5 positive social support

Source: Newmann, Fred M. and Gary G. Wehlage. 1993. Standards of Authentic Instruction. *Educational Leadership*. Vol 50, no 7: 8-12.

Appendix 36

36. A Goods-Services Continuum: Shostack (1977)

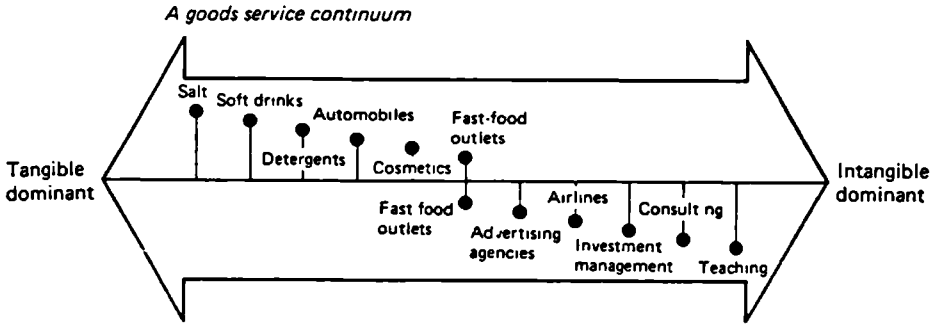

Figure 2.5

Source: Shostack G. L., 'Breaking Free from Product Marketing', *Journal of Marketing*, Vol. 41, No. 2, April 1977, American Marketing Association, p. 77

Source: Shostak, G. L. Breaking Free from Product Marketing. *Journal of Marketing*, Vol 41, no 2, April 1977: 77.

Appendix 37 (i)

Teachers as intellectuals: an assessment instrument (Thornbury 1993)

After Gouldner

Local Cosmopolitan

Gouldner contrasts those who stay in one school, or locality, with those who spiral round the system getting experience and promotions. What is the correct notion of a teaching career? Intense loyalty to a limited setting and promotion within it ? Or pursuit of a series of promotec posts which takes you round the country or to a variety of countries? Locals have their own culture; of favoured staffroom chairs; 'golden ages' of the school; personal status with the local community. Cosmopolitans have other characteristics you may have already observed in your school or college.

After Hoyle

Restricted Professionals Extended Professionals

Hoyle claims to identify two contrasting types of teacher. For example, two teachers. Teache A teaches her class only, only worries about her own immediate responsibilities, eg. the geography dept, which she takes very seriously; but is not interested in wider school and community matters. She doesn't read books on education. It's just a job - which she does very well - but she avoids talking about being a teacher or education when she goes out socially. Teacher B is into curriculum working groups, community projects, unions, and is a local councillor. She reads widely, including books on society education, and has many cultural interests reflecting her 'committed stance'. Both are sometimes criticised by other colleagues....in what ways do you think?

After Lieberman

Semi-Professional Professional

Professionals are recognised by about 14 criteria, some of which are: their professional body (consisting of fellow professionals) controls entry to the job; as individual professionals they have independence of judgement, and can refuse to do what senior professionals ask if their professional judgement says no; they possess 'a body of arcane knowledge'- in A level physics or their knowledge of the exams system which they choose to specialise in; they have rituals and procedures, for instance updating courses which maintain their arcane knowledge; they emphasis the acquisition of formal qualifications, and insist on access criteria -e.g. all deputy heads must have an MA; their salaries and/or status in the society are relatively high - not always both. They are difficult to sack. They do not unionise in the blue collar manner - or strike, preferring more subtle sanctions through exercising their monopoly power. Semi-professionals would lack many of these characteristics; and might unionise on a blue collar basis more often than professionals.

After Braverman

De-skilled Professionalised/Empowered

Braverman suggests that we may make an occupational group, or jobs, more high tech but this may involve actually 'de-skilling' the people concerned, for example as when typists acquire word processors (with spelling checkers) and audio tapes and no longer need short-hand or spelling. Health professionals (doctors and nurses) may find management rather than clinical priorities taking over their traditional areas of control.
Teachers.... well, you can guess. Are they being empowered or proletarianised and de-skilled i current developments? Where does the balance lie? Some argue that the extra technicities and arcana of the National Curriculum and SATs have enhanced 'professional' knowledge and skills: others say that what is being developed is a 'teacher-proof' curriculum suited to non-graduate, de-skilled teachers of infants and so forth.

After Giroux and Gramschi

'Transformative intellectual' 'Dirty worker'

Giroux and Gramschi would talk about the reconstructionist or even radical role of the teacher The key institution for changing society, for Gramschi, was education and the school rather than through the organisation of a proletarian or revolutionary movement through workers in factories, or peasants in the countryside. Giroux wants teachers to be extended professionals; intellectuals are the key force in any society - not just in the traditional Marxist-Leninist view of revolution in which the revolutionary leaders come from the bourgeoisie rather than the working class. Teachers are philosophical, public intellectuals (see Thornbury 1998 in Chapter 8 of the present study).

But this would be to see teachers as empowered professionals: some occupational sociologists would say that most teachers, with the sole exception of those who working in high-status independent schools, are nearer to being de- or un-skilled, restricted semi-professionals doing one of the low-status 'dirty jobs', e.g lavatory attendant, psychiatric nurse, that our society wants done. This explains their low public esteem, the stress of the job and so forth.

Appendix 37 (ii)

What kind of teacher are you? Ideologies of education?

Much curriculum theory can be discussed in terms of its underlying philosophy or ideology. For instance, a typical curriculum studies analysis (Skilbeck 1976) identifies four main ideologies: classical humanism, progressivism, reconstructionism and instrumentalism each of which represents a particular philosophical approach to the structure and content of the curriculum.

Classical humanism is said to concentrate on a curriculum focusing on cultural heritage and the passing on of the highest achievements and products of the arts, sciences and other areas of human endeavour.

Progressivism stresses 'student-centred' approaches, discovery learning and the student's freedom to explore her own interests.

Reconstructionism sees education as a means of improving society, as a force for planned progress and the development of a democratic community.

Instrumentalism envisages the main purpose of the curriculum as being to prepare children for adulthood - working life, leisure, parenthood, citizenship.

Morrison and Ridley (1988) have added a fifth category of **Liberal Humanism** which stresses co-operative learning, a common culture, equal access to knowledge, flexible teaching styles; the egalitarian emphasis of which would contrast with classical humanism.

Appendix 37 (iii)

What kind of teacher are you?

(Put a cross on the line at the point which represents where your position falls.)

After Gouldner

Local — Cosmopolitan

After Hoyle

Restricted — Extended

After Lieberman

Semi-Professional — Professional

After Braverman

De-skilling — Empowerment

After Giroux

'Transformative intellectual' — 'Dirty worker'

Appendix 38

The Road Not Taken, by Robert Frost: A 'metaphysical' poem seen in terms of possible worlds theory.

THE ROAD NOT TAKEN

Two roads diverged in a yellow wood *(aporia: multi-verse)*
And sorry I could not travel both *(aporia)*
And be one traveller, long I stood
And looked down one as far as I could *(accessibility relations, supervenience)*
To where it bent in the undergrowth
Then took the other, as just as fair
And perhaps having the better claim *(best argument)*
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day! *(counter-part theory)*
Yet knowing how way leads on to way, *(Markov stochastic process)*
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I -
I took the one less travelled by,
And that has made the difference.

Source: Frost, Robert. 1955. *Selected Poems*. London: Penguin Books.